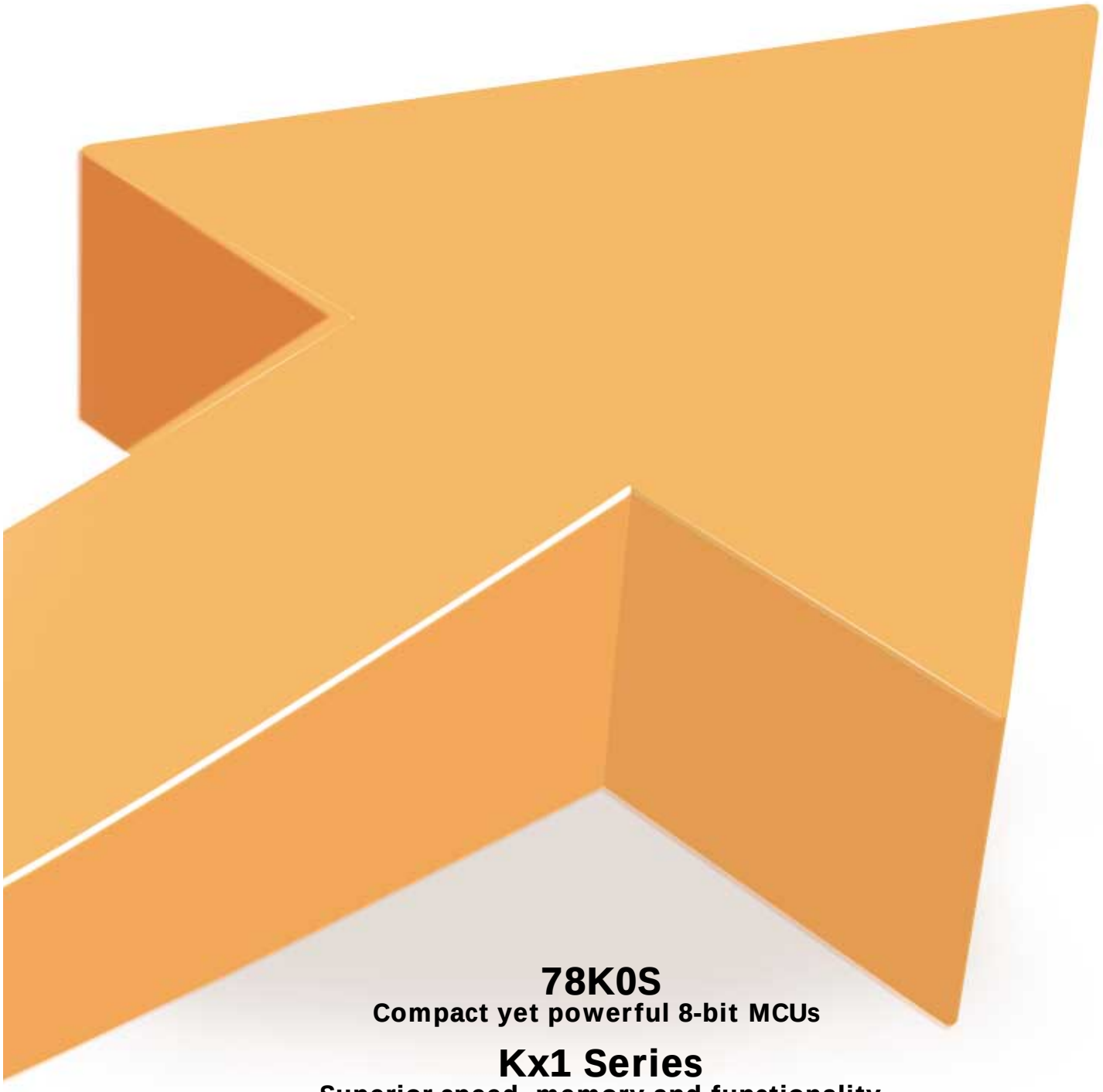
Empowered by Innovation NEC

Two Great Forces in the 8-bit Realm



78K0S
Compact yet powerful 8-bit MCUs

Kx1 Series
Superior speed, memory and functionality

Empower your creativity
78K
Embedded Controller

78K0S and Kx1 Series

78K0/Kx1
78K0/Kx1+
78K0S/Kx1+

NEC will continue to provide the following benefits

Future-proof cost-performance

Low power consumption
(one of the best of W/W venders)

Smooth migration lineup and future's Roadmap
(new concept Kx1 series in available)

By using the industry's most advanced technology and having market-oriented ideas

MCU Features

	75X/75XL	78K0S	78K0
CPU	4-bit	8-bit	8-bit
ROM	Internal ROM+RAM	Internal ROM+RAM	Internal ROM+RAM
RAM	64K bytes(max)	64K bytes(max)	64K bytes(max)
Multiplier	—	Hardware option	8×8=16 by inst.
Instruction Cycle	0.96/0.67μs	0.4/0.2μs	0.4/0.238/0.166μs
Power Supply	2.7/1.8 to 5.5V	1.8 to 5.5V	1.8 to 5.5V
C-language Compiler	—	○	○

78K0S

Ideal for upgrading from 4- to 8-bits

◎ Easy upgrade to our 78K0 family
◎ Best fit for compact applications, such as car accessories, remote controls, home appliances and PC peripherals
◎ Wide range of LCD-control functions such as power-on-reset, voltage booster and A/D converter
◎ On-chip flash memory versions
◎ Speed up current CORE from 4Q/01(5MHz→10MHz※1)

※1 D78907x/10xA/11xA/16x/17x

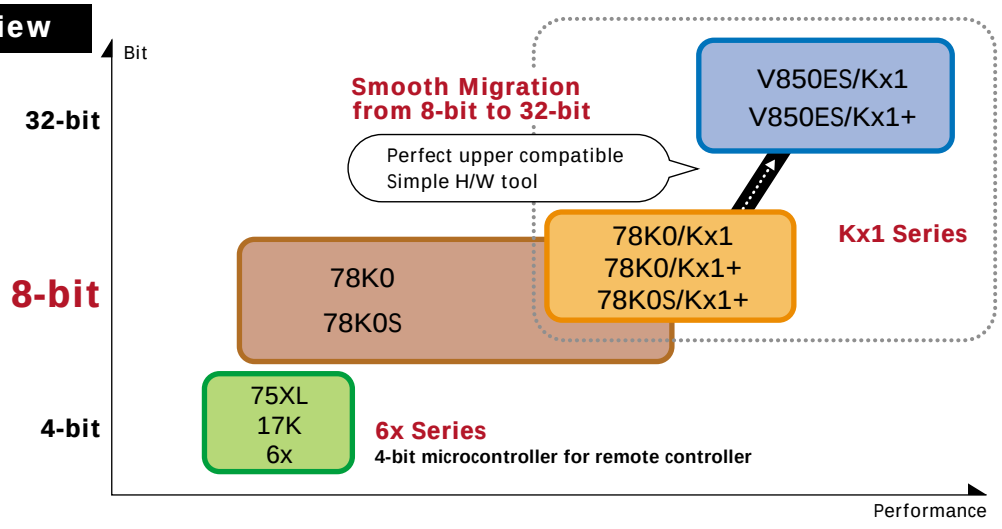
78K0

Enhanced performance for consumer and automotive electronics

◎ Enhanced version of our best-selling 78K0 family
◎ Ideal choice for consumer electronics, automotive use and other 8-bit applications
◎ Various ASSPs available:built-in functions include automotive bus, 10bit timer for inverter motor control
◎ On-chip flash memory versions
◎ Higher speed than conventional 78K0(8.38MHz→12MHz※2)

※2 D78002xA/003xA/007x/098x

Overview



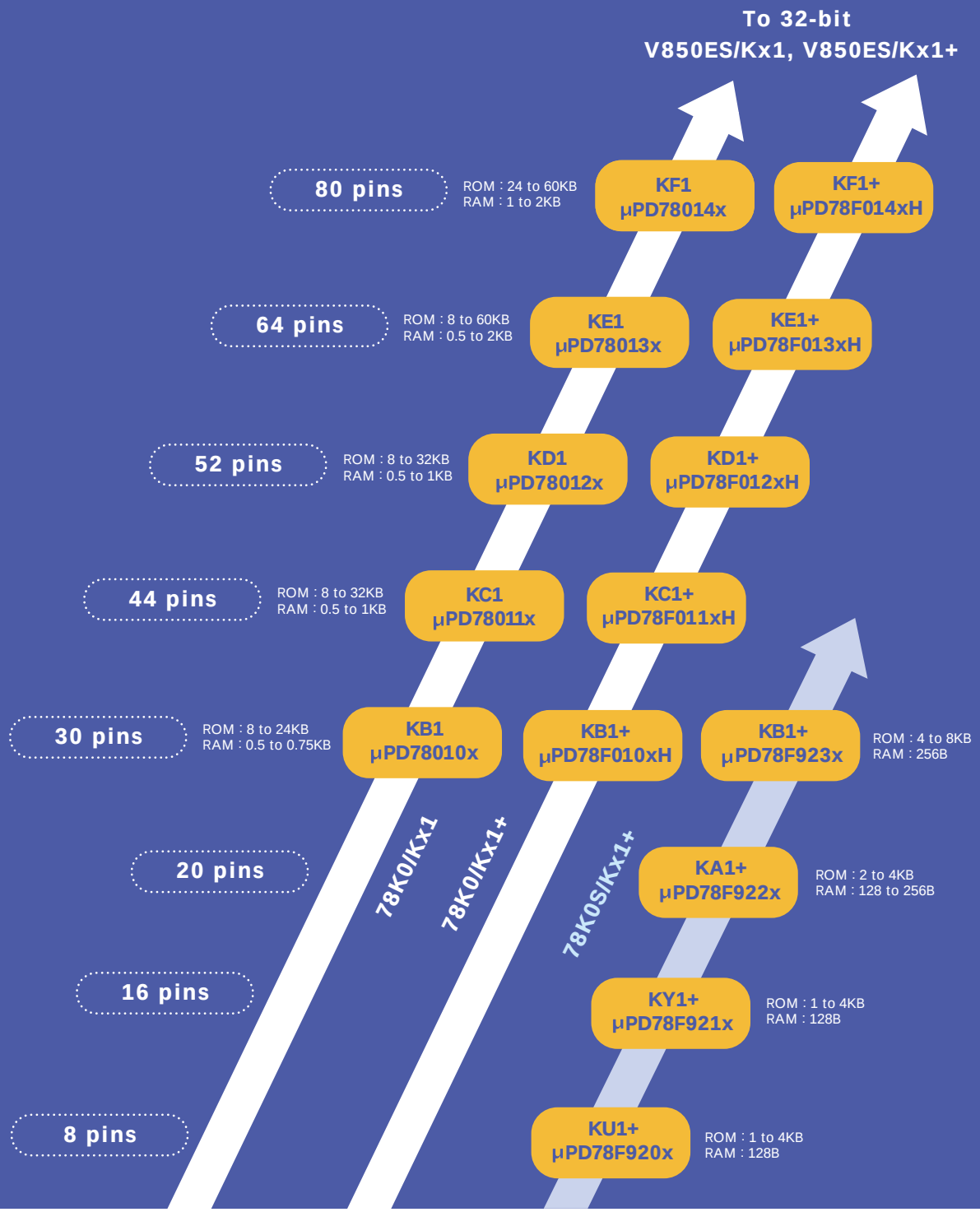
Kx1 series

78K0/Kx1 78K0/Kx1+ 78K0S/Kx1+

Brushed up peripherals POC/LVI, WDT, On-chip Ring-OSC

- **Unique and powerful reset functions**
  - Power-on clear and low voltage detection
  - Reset output for external ICs
- **On-chip Ring oscillator**
  - Fast start-up
  - Watchdog independent of the CPU clock
  - High speed ring-oscillator (8MHz) for 78K0S/Kx1+
- **Higher speed, Lower EMI noise**
  - When 5V and 10MHz, less than 70dBm (reference values)
- **Assured future expansion**
  - Common peripheral functions incorporated
  - Perfect upper compatible (8→32-bit)
  - Simple H/W tools

Road map



MCU Features

	78K0/Kx1	78K0/Kx1+	78K0S/Kx1+
CPU	8-bit 78K0 core	8-bit 78K0 core	8-bit 78K0S core
ROM	Internal ROM+RAM	Internal ROM+RAM	Internal ROM+RAM
RAM	64K bytes(max)	64K bytes(max)	64K bytes(max)
Multiplier [bit]	16×16, 32÷16 (KE1, KF1, KE1+, KF1+)		8×8 (KB1+)
Instruction Cycle	0.166μs	0.125μs	0.2μs
Power Supply	2.5 to 5.5V	2.0 to 5.5V	2.0 to 5.5V
C-language Compiler	○	○	○
Number of Pins	30/44/52/64/80-pins		8/16/20/30-pins
Mask ROM version	Available	None	
Flash memory	2 power supplies	Single power supply & self-programming	
On-chip ring-OSC	240kHz (TYP.)		8MHz and 240kHz (TYP.)
On-chip debug	None (supported in Kx1+)	On-chip debug chip available	None
On-chip regulator	Provided (KE1, KF1)	None	
UART (LIN bus)	Provided (all products)		Provided (KB1+, KA1+)
Power-on reset (POC)	2 level selectable	Fixed to 1 level	

78K0/Kx1

New concept microcontroller, and smooth migration

- ◎ Same core and same instruction as our 78K0 series
- ◎ Extensive memory and package selection
- ◎ Adupting common peripheral functions in Kx1 series
- ◎ External IC functions for high-reliability system are integrated on one chip
- ◎ Total system cost reduction by security function enhancement
- ◎ Mask ROM and flash memory versions
- ◎ High speed operation (Max. 12MHz)

78K0/Kx1+

Improved flash memory creates new application fields

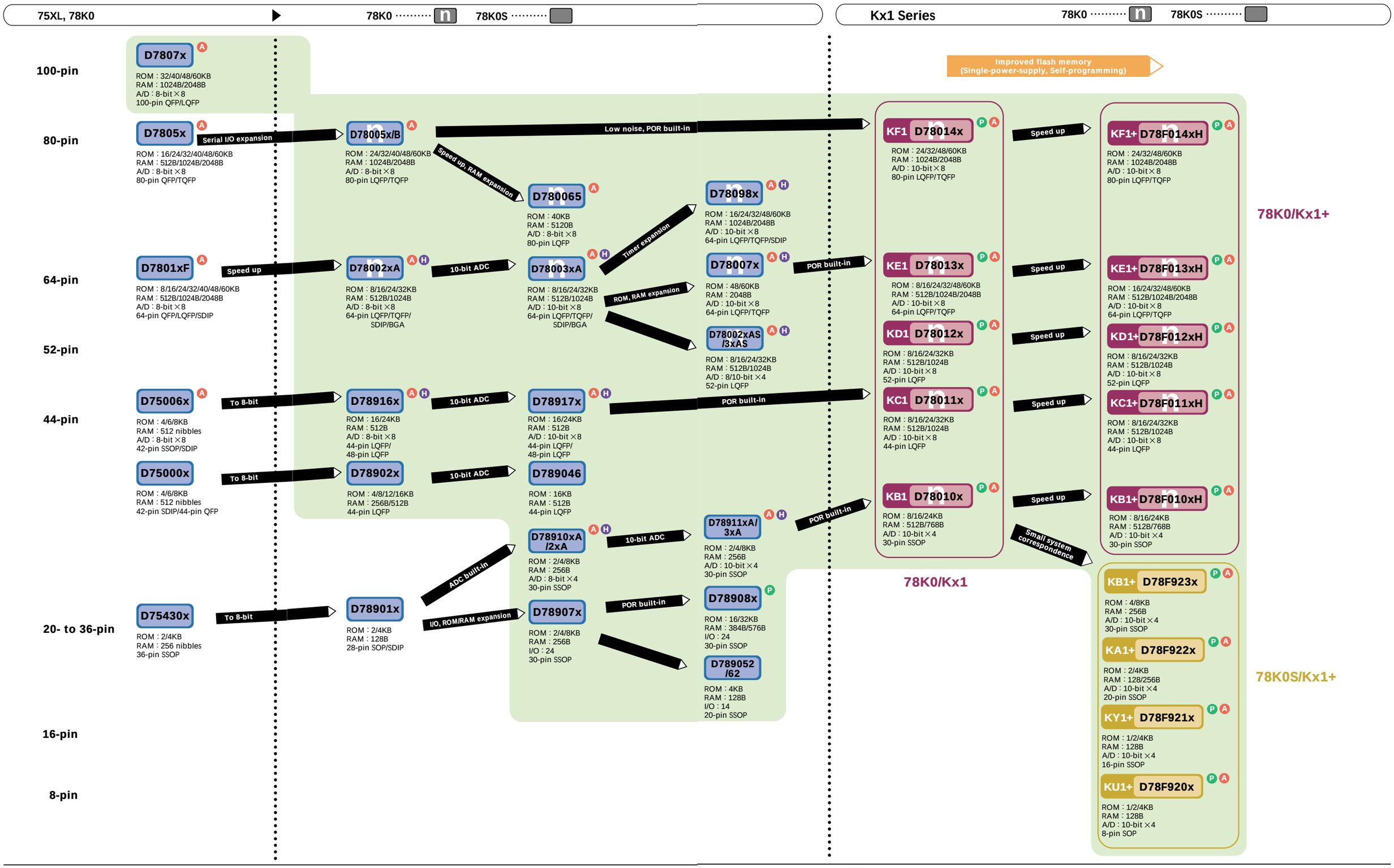
- ◎ Enhanced version of our best-selling 78K0/Kx1
- ◎ Single-power-supply flash memory
- ◎ Self-programming function for re-writing the data
- ◎ EEPROM emulation function for using as a non-volatile memory for storing data
- ◎ Higher speed operation (Max. 16MHz)

78K0S/Kx1+

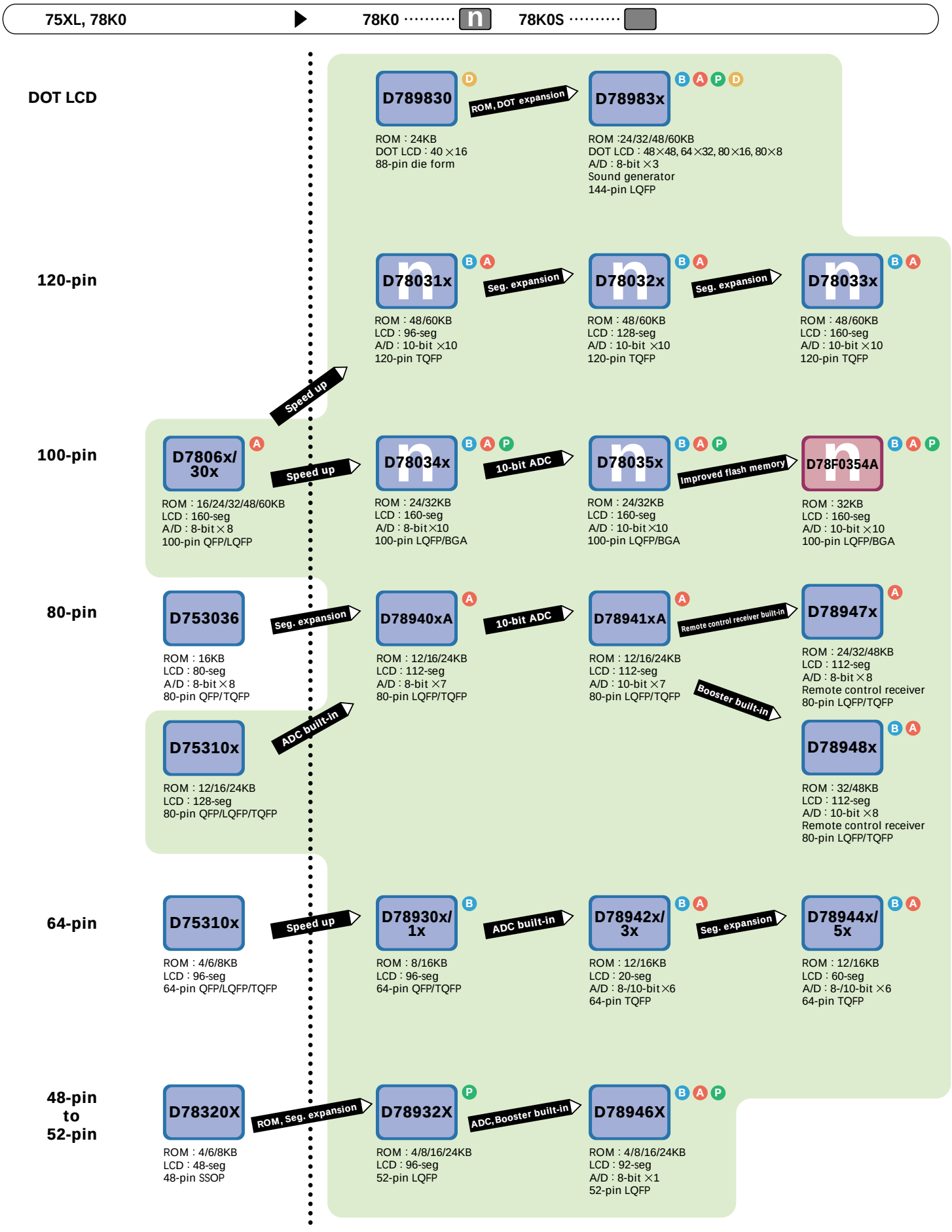
For small size and low power consumption systems

- ◎ Same core and same instruction as our 78K0S series (Easy upgrade to our 78K0 series)
- ◎ Best fit for compact applications, such as sensor applications and switch applications
- ◎ Improved flash memory is incorporated
- ◎ On-chip high speed ring-oscirator (8MHz)
- ◎ Speed up current CORE (Max. 10MHz)

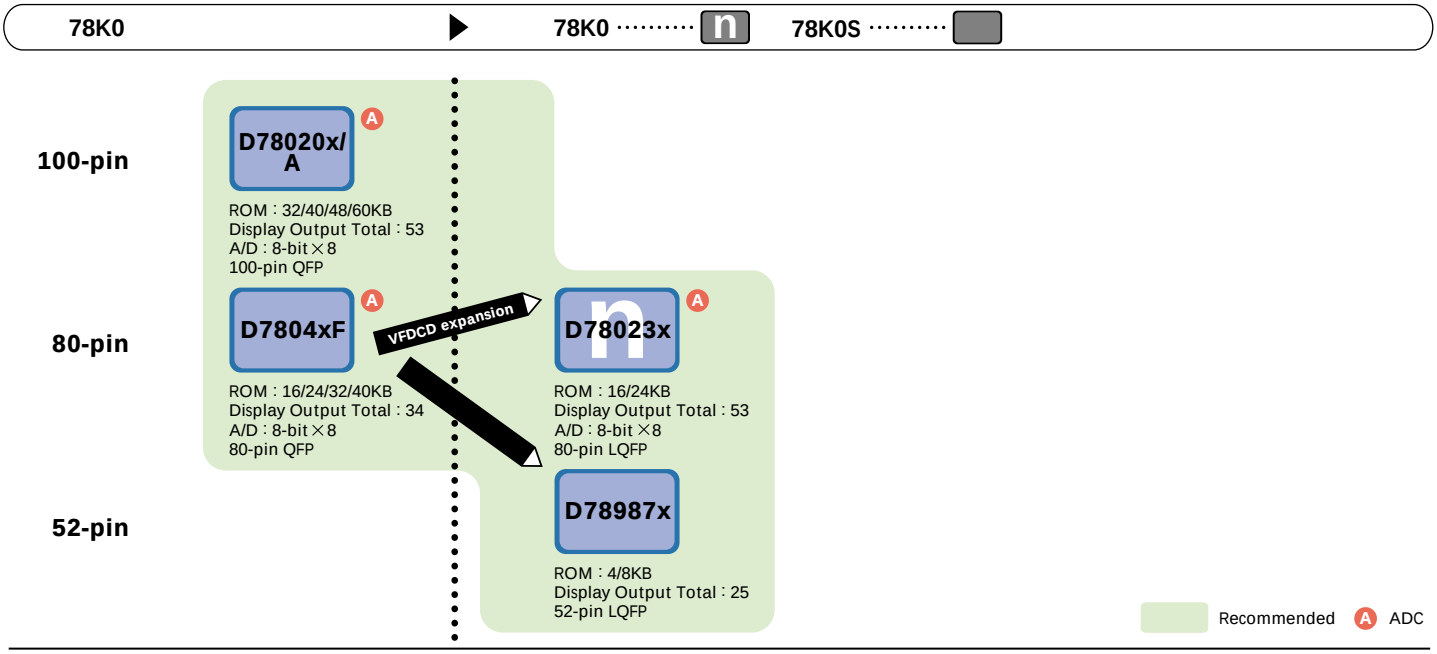
Multi-purpose MCUs



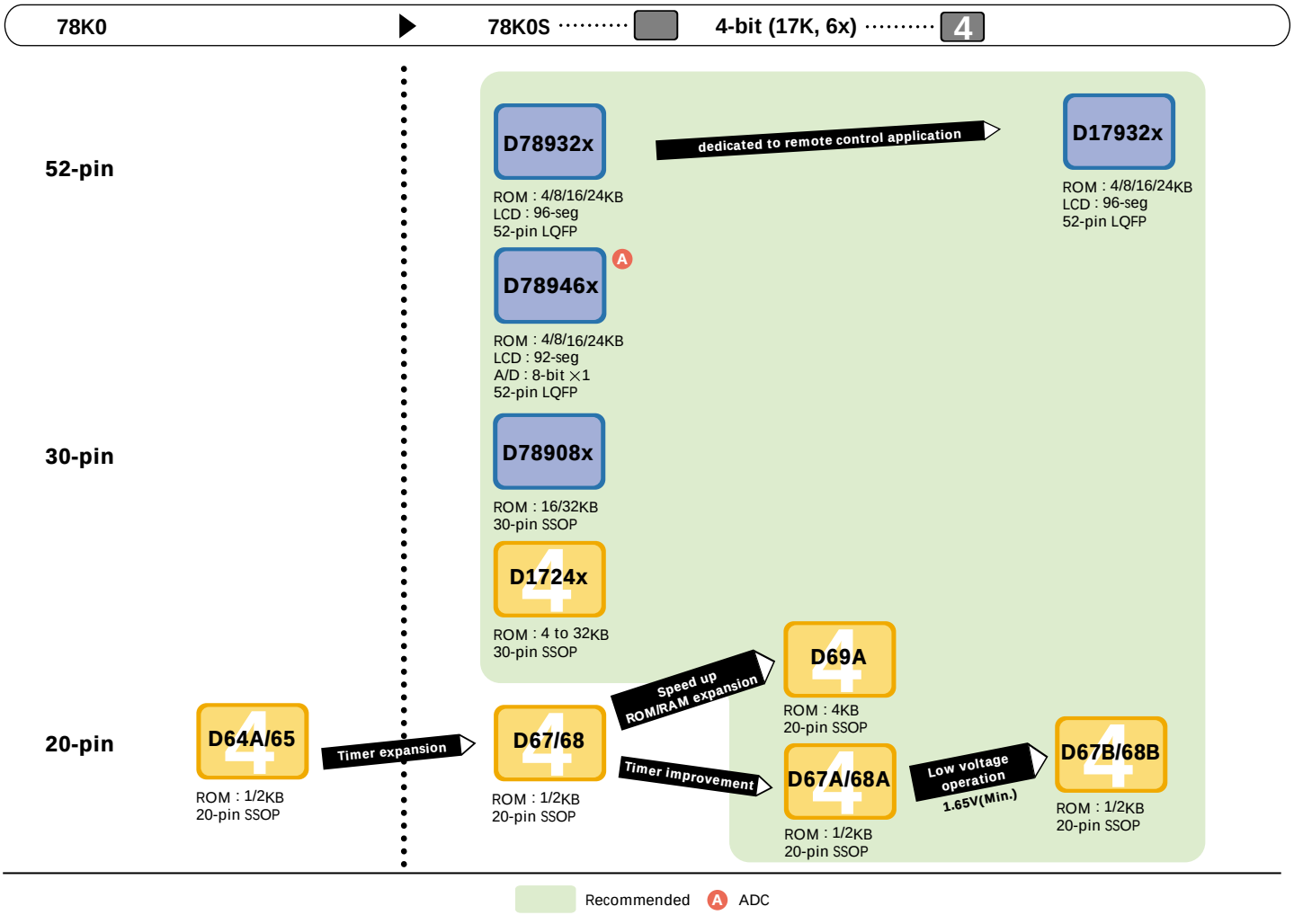
LCD control


75XL, 78K0
78K0
n
78K0S
DOT LCD
D789830
D
ROM, DOT expansion
D78983x
B A P D
ROM : 24KB
DOT LCD : 40 × 16
88-pin die form
ROM :24/32/48/60KB
DOT LCD : 48×48, 64×32, 80×16, 80×8
A/D : 8-bit ×3
Sound generator
144-pin LQFP
120-pin
D78031x
B A
Seg. expansion
D78032x
B A
Seg. expansion
D78033x
B A
ROM : 48/60KB
LCD : 96-seg
A/D : 10-bit ×10
120-pin TQFP
ROM : 48/60KB
LCD : 128-seg
A/D : 10-bit ×10
120-pin TQFP
ROM : 48/60KB
LCD : 160-seg
A/D : 10-bit ×10
120-pin TQFP
Speed up
100-pin
D7806x/ 30x
A
Speed up
D78034x
B A P
10-bit ADC
D78035x
B A P
Improved flash memory
D78F0354A
B A P
ROM : 16/24/32/48/60KB
LCD : 160-seg
A/D : 8-bit × 8
100-pin QFP/LQFP
ROM : 24/32KB
LCD : 160-seg
A/D : 8-bit ×10
100-pin LQFP/BGA
ROM : 24/32KB
LCD : 160-seg
A/D : 10-bit ×10
100-pin LQFP/BGA
ROM : 32KB
LCD : 160-seg
A/D : 10-bit ×10
100-pin LQFP/BGA
80-pin
D753036
Seg. expansion
D78940xA
A
10-bit ADC
D78941xA
A
Remote control receiver built-in
D78947x
A
ROM : 16KB
LCD : 80-seg
A/D : 8-bit × 8
80-pin QFP/TQFP
ROM : 12/16/24KB
LCD : 112-seg
A/D : 8-bit ×7
80-pin LQFP/TQFP
ROM : 12/16/24KB
LCD : 112-seg
A/D : 10-bit ×7
80-pin LQFP/TQFP
ROM : 24/32/48KB
LCD : 112-seg
A/D : 8-bit × 8
Remote control receiver
80-pin LQFP/TQFP
ADC built-in
Booster built-in
D75310x
D78948x
B A
ROM : 12/16/24KB
LCD : 128-seg
80-pin QFP/LQFP/TQFP
ROM : 32/48KB
LCD : 112-seg
A/D : 10-bit ×8
Remote control receiver
80-pin LQFP/TQFP
64-pin
D75310x
Speed up
D78930x/ 1x
B
ADC built-in
D78942x/ 3x
B A
Seg. expansion
D78944x/ 5x
B A
ROM : 4/6/8KB
LCD : 96-seg
64-pin QFP/LQFP/TQFP
ROM : 8/16KB
LCD : 96-seg
64-pin QFP/TQFP
ROM : 12/16KB
LCD : 20-seg
A/D : 8-/10-bit ×6
64-pin TQFP
ROM : 12/16KB
LCD : 60-seg
A/D : 8-/10-bit ×6
64-pin TQFP
48-pin to 52-pin
D78320X
ROM, Seg. expansion
D78932X
P
ADC, Booster built-in
D78946X
B A P
ROM : 4/6/8KB
LCD : 48-seg
48-pin SSOP
ROM : 4/8/16/24KB
LCD : 96-seg
52-pin LQFP
ROM : 4/8/16/24KB
LCD : 92-seg
A/D : 8-bit ×1
52-pin LQFP
New Products
Recommended
B Booster
A ADC
P POR
D DOT

VFD control



Remote control



ASSPs

78K0 ····· n　78K0S ·····

Utility Meter

D78095x
Ultra-low power consumption
LCD : 90-seg
ROM : 48/60KB
100-pin LQFP

D789881
Ultra-low power consumption
LCD : 104-seg
ROM : 16KB
64-pin LQFP

Inverter

D78098x (A) (H)
10-bit timer for
AC/DC inverter control
ROM : 16/24/32/48/60KB
64-pin QFP/TQFP/SDIP

D78F0714 (A)
10-bit timer for
AC/DC inverter control
ROM : 32KB
High-speed (Max. 20MHz)
64-pin TQFP

D78984x (A)
10-bit timer for AC
inverter control
ROM : 8/16KB
44-pin LQFP

USB Keyboard

D789800
Universal Serial Bus
ROM : 8KB
44-pin LQFP

BMU

D78917xY (A)
System management bus
A/D : 10-bit×8
ROM : 16/24KB
48-pin TQFP/44-pin LQFP

Sensor

D789863/4 (A)
Analog macro for sensor
A/D : 10-bit×3
ROM : 4KB
30-pin SSOP

Development Year ▶

New Products　(A) ADC　(H) Extended-specification (High-speed)

Automotive ASSPs

78K0 ····· n　78K0S ·····

CAN

D78081x B
DCAN(500Kbps)
ROM : 32/48KB
64-pin LQFP/TQFP

D78082x D
DCAN(500Kbps)
LCD : 112-seg
Stepper motor control/drive
Cross coil control/drive
ROM : 32/48/60KB
80-pin LQFP

D780703Y B C
DCAN(500Kbps)
ROM : 60KB
80-pin LQFP

D780948A D
DCAN(500Kbps)
LCD : 160-seg
Sound generator
ROM : 60KB
100-pin QFP

D789850A B
DCAN(500Kbps)
ROM : 16KB
30-pin SSOP

D789852 B
DCAN(500Kbps)
ROM : 24/32KB
44-pin LQFP

J1850

D780833Y B C
J1850 bus interface
ROM : 60KB
80-pin LQFP

D780834 D
J1850 bus interface
LCD : 160-seg
Stepper motor control/drive
Cross coil control/drive
ROM : 48KB
100-pin LQFP

IEBus™

D7809x/B C
IEBus interface
ROM : 40/48/60KB
80-pin LQFP

D780702Y C
IEBus interface
ROM : 60KB
80-pin LQFP

Dash Board

D78085x/A D
LCD : 80-seg
Stepper motor control/drive
Cross coil control/drive
ROM : 32/40KB
80-pin LQFP

Keyless Entry

D754144/244
ROM : 4KB
RAM : 128 nibbles
EEPROM™ : 16B
20-pin SSOP

D789860/61
ROM : 4KB
RAM : 128B
EEPROM : 32B
20-pin SSOP

D789862
ROM : 16KB
RAM : 512B
EEPROM : 256B
30-pin SSOP

CD Text

D780065 C
ROM : 40KB
RAM : 5120B
A/D : 8-bit×8
80-pin LQFP

Development Year ▶

New Products　D Dash Board　B Body Control　C Car Audio

Product List

Multi-purpose MCUs

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
78K0S/ Kx1+	KU1+(78F920x)	8-pin SSOP	1/2/4	128	—	6	3	8-bit×2	—	10-bit×4	—	—	POR,LVI,High-speed Ring-osc
	KY1+(78F921x)	16-pin SSOP	1/2/4	128	—	14	3	8-bit×2	—	10-bit×4	—	—	POR,LVI,High-speed Ring-osc
	KA1+(78F922x)	20-pin SSOP	2/4	128/ 256	—	17	4	8-bit×2	1(UART×1)	10-bit×4	—	—	LIN,POR,LVI,High-speed Ring-osc
	KB1+(78F923x)	30-pin SSOP	4/8	256	—	26	4	8-bit×2	1(UART×1)	10-bit×4	—	—	LIN,POR,LVI,High-speed Ring-osc
78K0/ Kx1+	KB1+(78F010xH)	30-pin SSOP	8/16/24	512/ 768	—	22	5	8-bit×3	2(UART×2)※1	10-bit×4	—	—	LIN,POR,LVI, Ring-osc
	KC1+(78F011xH)	44-pin SSOP	8/16/24/32	512/ 1K	—	32	7	8-bit×4	2(UART×2)	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KD1+(78F012xH)	52-pin SSOP	8/16/24/32	512/ 1K	—	39	7	8-bit×4	2(UART×2)	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KE1+(78F013xH)	64-pin SSOP	8/16/24/32/ 48/60	512/ 1K/2K	—	51	8※2	8-bit×4	3(UART×2)※3	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KF1+(78F014xH)	80-pin SSOP	24/32/48/60	1K/ 2K	—	67	8※4	8-bit×4	4(UART×2)※5	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
78K0/ Kx1	KB1(78010x)	30-pin SSOP	8/16/24	512/ 768	—	22	5	8-bit×3	2(UART×2)※1	10-bit×4	—	—	LIN,POR,LVI, Ring-osc
	KC1(78011x)	44-pin LQFP	8/16/24/32	512/ 1K	—	32	7	8-bit×4	2(UART×2)	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KD1(78012x)	52-pin LQFP	8/16/24/32	512/ 1K	—	39	7	8-bit×4	2(UART×2)	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KE1(78013x)	64-pin LQFP/ TQFP	8/16/24/32/ 48/60	512/ 1K/2K	—	51	8※2	8-bit×4	3(UART×2)※3	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
	KF1(78014x)	80-pin LQFP/ TQFP	24/32/48/60	1K/ 2K	—	67	8※4	8-bit×4	4(UART×2)※5	10-bit×8	—	○	LIN,POR,LVI, Ring-osc
78K0S	789052	20-pin SSOP	4	128	—	14	3	8-bit×1	—	—	—	—	Cera
	789062	20-pin SSOP	4	128	—	14	3	8-bit×1	—	—	—	—	RC
	789071/2/4	30-pin SSOP	2/4/8	256	—	24	3	8-bit×1	1(UART×1)	—	—	—	
	789086/8	30-pin SSOP	16/32	384/ 576	—	24	3	8-bit×1	1(UART×1)	—	—	—	POR
	789101/2/4A	30-pin SSOP	2/4/8	256	—	20	3	8-bit×1	1(UART×1)	8-bit×4	—	—	Cera
	789121/2/4A	30-pin SSOP	2/4/8	256	—	20	3	8-bit×1	1(UART×1)	8-bit×4	—	—	RC
	789111/2/4A	30-pin SSOP	2/4/8	256	—	20	3	8-bit×1	1(UART×1)	10-bit×4	—	—	Cera
	789131/2/4A	30-pin SSOP	2/4/8	256	—	20	3	8-bit×1	1(UART×1)	10-bit×4	—	—	RC
	789022/4/5/6	44-pin LQFP	4/8/12/16	256/ 512	—	34	3	—	1(UART×1)	—	—	—	
	789046	44-pin LQFP	16	512	—	34	4	8-bit×1	1(UART×1)	—	—	○	
	789166/7	44-pin LQFP/ 48-pin TQFP	16/24	512	—	31	6	8-bit×3	1(UART×1)	8-bit×8	—	○	
	789176/7	44-pin LQFP/ 48-pin TQFP	16/24	512	—	31	6	8-bit×3	1(UART×1)	10-bit×8	—	○	
78K0	780021/2/3/4AS	52-pin LQFP	8/16/24/32	512/ 1024	—	39	5	8-bit×2	3(UART×1)	8-bit×4	—	○	
	780031/2/3/4AS	52-pin LQFP	8/16/24/32	512/ 1024	—	39	5	8-bit×2	3(UART×1)	10-bit×4	—	○	
	780021/2/3/4A	64-pin LQFP/ TQFP/ SDIP/BGA	8/16/24/32	512/ 1024	—	51	5	8-bit×2	3(UART×1)	8-bit×8	—	○	
	780031/2/3/4A	64-pin LQFP/ TQFP/ SDIP/BGA	8/16/24/32	512/ 1024	—	51	5	8-bit×2	3(UART×1)	10-bit×8	—	○	
	780076/8	64-pin LQFP/TQFP	48/60	2048	—	52	6	8-bit×2	3(UART×2)	10-bit×8	—	○	
	780982/3/4/6/8	64-pin LQFP/ TQFP/SDIP	16/24/32/48/ 60	1024/ 2048	—	47	7	8-bit×2	3(UART×2)	10-bit×8	—	—	
	780053/4/5/6/8	80-pin LQFP/TQFP	24/32/48/60	1024/ 2048	—	68	5	14-bit×1	3(UART×1)	8-bit×8	—	○	
	780065	80-pin LQFP	40	5120	—	60	5	8-bit×2	4(UART×1)	8-bit×8	—	○	
	78074B/5B/6/8	100-pin QFP/LQFP	32/40/48/60	1024/ 2048	—	88	7	14-bit×1 8-bit×2	3(UART×1)	8-bit×8	—	○	

※1.UART×1(8K ROM) ※2.7ch(8K/16K ROM) ※3.2ch(8K/16K ROM) ※4.7ch(24K/32K ROM) ※5.3ch(24K/32K ROM)

LCD control

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
78K0S	789322/4/6/7	52-pin LQFP	4/8/16/24	256/ 512	—	21	4	8-bit×1	1	—	24-seg×4	○	POR
	789462/4/6/7	52-pin LQFP	4/8/16/24	256/ 512	—	13	4	8-bit×1	—	8-bit×1	23-seg×4	○	Booster POR
	789304/6	64-pin QFP/ TQFP	8/16	512	—	23	5	8-bit×1	2(UART×1)	—	24-seg×4	○	Booster
	789314/6	64-pin QFP/ TQFP	8/16	512	—	23	5	8-bit×1	2(UART×1)	—	24-seg×4	○	Booster RC
	789425/6	64-pin LQFP/ TQFP	12/16	512	—	40	5	8-bit×2	1(UART×1)	8-bit×6 10-bit×6	5-seg×4	○	Booster
	789435/6	64-pin LQFP/ TQFP	12/16	512	—	40	5	8-bit×2	1(UART×1)	8-bit×6 10-bit×6	5-seg×4	○	Booster RC
	789445/6	64-pin LQFP/ TQFP	12/16	512	—	30	5	8-bit×2	1(UART×1)	8-bit×6 10-bit×6	15-seg×4	○	Booster
	789455/6	64-pin LQFP/ TQFP	12/16	512	—	30	5	8-bit×2	1(UART×1)	8-bit×6 10-bit×6	15-seg×4	○	Booster RC
	789405/6/7A	80-pin LQFP/ TQFP	12/16/24	512	—	43	6	—	1(UART×1)	8-bit×7	28-seg×4	○	
	789415/6/7A	80-pin LQFP/ TQFP	12/16/24	512	—	43	6	—	1(UART×1)	10-bit×7	28-seg×4	○	
	789477/8/9	80-pin LQFP/ TQFP	24/32/48	768/1024/ 1536	—	45	6	8-bit×1	2(UART×1)	8-bit×8	28-seg×4	○	Remote control receiver
	789488/9	80-pin LQFP/ TQFP	32/48	1024/ 1536	—	45	6	8-bit×1	2(UART×1)	10-bit×8	28-seg×4	○	Booster
78K0	78062/3/4	100-pin QFP/LQFP	16/24/32	512/ 1024	—	57	5	14-bit×1	2(UART×1)	8-bit×8	40-seg×4	○	
	780306/8	100-pin QFP/LQFP	48/60	2048	—	57	5	14-bit×1	3(UART×1)	8-bit×8	40-seg×4	○	
	780343/4	100-pin LQFP/ FPBGA	24/32	1024	—	66	7	8-bit×3	3(UART×1)	8-bit×8	40-seg×4	○	
	780353/4	100-pin LQFP/ FPBGA	24/32	1024	—	66	7	8-bit×3	3(UART×1)	10-bit×10	40-seg×4	○	
	780316/8	120-pin TQFP	48/60	2560	—	70	7	8-bit×3	2(UART×1)	10-bit×10	24-seg×4	○	Booster
	780326/8	120-pin TQFP	48/60	2560	—	62	7	8-bit×3	2(UART×1)	10-bit×10	32-seg×4	○	Booster
	780336/8	120-pin TQFP	48/60	2560	—	54	7	8-bit×3	2(UART×1)	10-bit×10	40-seg×4	○	Booster
78K0S	789830	88-pin die from	24	1024	—	30	4	—	1(UART×1)	—	40×16	○	DOT LCD
	789832/3/4/5B	144-pin LQFP	24/32/48/60	2240/ 3264	—	37	8	8-bit×1	1(UART×1)	8bit×3	48×48 64×32 80×16 80×8	○	Booster POR,DOT LCD

VFD control

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
78K0S	789870/1	52-pin LQFP	4/8	512	—	33	5	—	1	—	—	○	
78K0	780232/3	80-pin LQFP	16/24	768	—	40	4	8-bit×2	2	8-bit×4	—	—	
	78042/3/4/5F	80-pin LQFP	16/24/32/40	624/ 1136	—	68	6	14-bit×1	2	8-bit×8	—	○	
	780204/5/6/8	100-pin LQFP	32/40/48/60	1168/ 2192	—	74	5	14-bit×1	2	8-bit×8	—	○	

Product List

Remote control

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
6x Series (4-bit)	67B/68B	20-pin SSOP	1002×10-bit/ 2026×10-bit	32×4-bit	—	15	1	9-bit×1	—	—	—	—	for infrared remote controller (low voltage)
	69A/6P9	20-pin SSOP	4074×10-bit	128×4-bit	—	15	1	9-bit×1	—	—	—	—	for infrared remote controller
17K Series (4-bit)	17240/1/2/3/4/5/6	30-pin SSOP	2048×16-bit to 16384×16-bit	447×4-bit	—	15	1	9-bit×1	—	—	—	—	for preset remote controller
78K0S Series (8-bit)	789086/8	30-pin SSOP	16/32	256/320×8-bit	—	24	5	8-bit×1	1(UART×1)	—	—	—	for preset remote controller
	789322/4/6/7	52-pin LQFP	4/8/16/24	256/512×8-bit	—	21	4	8-bit×1	1	—	24-seg×4	○	for remote controller with LCD
	789462/4/6/7	52-pin LQFP	4/8/16/24	256/512×8-bit	—	18	4	8-bit×1	—	8-bit×1	23-seg×4	○	for remote controller with LCD
179K Series (8-bit)	179322/4/6/7	52-pin LQFP	4/8/16/24	256/512×8-bit	—	21	4	8-bit×1	—	—	24-seg×4	○	for remote controller with LCD

ASSPs

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
78K0S	789841/2	44-pin QFP/LQFP	8/16	256	—	30	6	10-bit×6	1(UART×1)	8-bit×8	—	—	for inverter
	789800	44-pin LQFP	8	256	—	31	3	—	2(USB×1)	—	—	—	for USB keyboard
	789176/7Y	44-pin LQFP/ 48-pin TQFP	16/24	512	—	31	6	8-bit×3	2(UART×1, SMB×1)	10-bit×8	—	○	for BMU
	789881	64-pin LQFP	16	512	—	28	4	8-bit×2	1(UART×1)	—	26-seg×4	○	for utility meter
	789863/4	20-pin SSOP	4	256	64	5	3	—	—	10-bit×3	—	—	for Sensor
78K0	780957/8	100-pin LQFP	48/60	2048	—	69	7	—	2(UART×1)	—	30-seg×3	○	for utility meter
	780982/3/4/6/8	64-pin QFP/ TQFP/SDIP	16/24/32/48/ 60	1024/ 2048	—	47	7	10-bit×6 8-bit×3	3(UART×2)	10-bit×8	—	—	for inverter
	78F0714	64-pin TQFP	32	1024	—	48	7	10-bit×6 8-bit×3	2(UART×1)	10-bit×8	—	—	for inverter

Automotive ASSPs

Series	Part Number	Package	ROM (Kbytes)	RAM (bytes)	EEPROM (bytes)	I/O	Timer	PWM	Serial I/O	ADC	LCD C/D	Sub Clock	Note
78K0S	789850A	30-pin SSOP	16	768	—	18	3	8-bit×1	2(UART×1)	8-bit×4	—	○	for CAN
	789852	44-pin LQFP	24/32	1312	—	31	5	8-bit×3	3(UART×2)	10-bit×8	—	○	
78K0	780814/6	64-pin LQFP/TQFP	32/48	1504	—	46	6	8-bit×2	3(UART×1)	8-bit×12	—	○	
	780701Y/3Y	80-pin LQFP	60	3360	—	67	7	8-bit×3	4(UART×1, I^2C×1)	8-bit×16	—	—	
	780824/6/8B	80-pin LQFP	32/48/60	1504/ 3040	—	59	6	8-bit×2	3(UART×1)	8-bit×5	28-seg×4	—	
	780948A	100-pin QFP	60	2016	—	79	6	8-bit×2	3(UART×1)	8-bit×8	40-seg×3	—	
	780833Y	80-pin LQFP	60	3072	—	65	7	8-bit×3	4(UART×1, I^2C×1)	8-bit×16	—	—	for J1850
	780834	100-pin LQFP	48	3072	—	79	7	8-bit×4	2(UART×1)	8-bit×4	40-seg×3	—	
	78095/6/8B	80-pin LQFP	40/48/60	1056/ 3104	—	69	5	8-bit×2	3(UART×1)	8-bit×8	—	○	for IEBUS
	780702Y	80-pin LQFP	60	3072	—	67	7	8-bit×3	4(UART×1, I^2C×1)	8-bit×16	—	—	
	780851/2	80-pin LQFP	32/40	1536	—	56	6	8-bit×2	3(UART×1)	8-bit×5	20-seg×4	—	for dash board
78K0S	789860/1	20-pin SSOP	4	128	32	14	3	8-bit×1	—	—	—	—	for keyless entry
	789862	30-pin SSOP	16	512	256	22	4	8-bit×1	2(UART×1)	—	—	—	for keyless entry

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