

TX19 Family TX19A/H1 Series

32-bit / 241-pin



TMP19A44F10XBG TMP19A44FDAXBG TMP19A44FEXBG



Low-power microcontroller based on TX19A/H1 core containing NANO FLASHTM and three high-speed AD converters for enhanced analog functionality and realizing high-speed computation with 80-MHz operation and built-in FPU and MAC

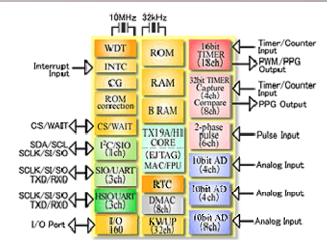
Features

TX19A/H1 CPU Core

- ► Operating voltage : I/O, ADC= 2.7 to 3.6 V (Built-in regulators)
- Maximum Operating frequency: 80 MHz (10 MHz × 8 by PLL)
- Floating Point Unit (FPU)

Built-in Functions

- ► 10-bit AD converter (1.15µs): 16 channels
- ► DMA controller : 8 channels
- ▶ 16-bit timer : 18 channels
- 32-bit timer : 1 channel
 - Compare register : 8 channels
 - Capture register : 4 channels
- 2-phase pulse input counter function: 6 channels
- ► I²C/SIO : 1 channel
- SIO/UART : 3 channels
- ► HSIO/UART : 3 channels
- Multiplex /separate bus selectable
- Back-up block
- ► ROM correction function



Flash Memory Size

Part number	ROM (Flash)	RAM	BRAM
TMP19A44F10XBG	1 Mbyte	48 Kbytes	16 Kbytes
TMP19A44FDAXBG	512 Kbytes	24 Kbytes	8 Kbytes
TMP19A44FEXBG	768 Kbytes	48 Kbytes	16 Kbytes

FPU: Floating Point Unit MAC: Multiply-Accumulate Unit

^{*}NANO FLASHTM is a trademark of Toshiba Corporation.

■ Package Information

Pin Assignments

A1	A2	A3	A4	A\$	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17
81	82	83	84	85	B6	87	88	89	810	811	812	B13	814	815	816	817
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17
D1	02	O3	04	05	D6	07	08	D9	D10	D11	D12	D13	014	D15	D16	D17
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
F1	F2	F3	F4	F5	F6	F6						F13	F14	F15	F16	F17
G1	G2	G3	G4	G5								G13	G14	G15	G16	G17
Н1	H2	Н3	H4	H\$								H13	H14	H15	H16	H17
J1	J2	J3	J4	J\$	Top View						J13	J14	J15	J16	J17	
KI	K2	К3	K4	K5							K13	K14	K15	K16	K17	
LI	L2	L3	L4	L5							L13	L14	L15	L16	L17	
MI	M2	М3	M4	M5							M13	M14	M15	M16	M17	
N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	NII	N12	N13	N14	N15	N16	N17
P1	P2	P3	P4	P\$	P8	P7	P8	P9	P10	P11	P12	P13	914	P15	P16	P17
R1	R2	R3	R4	R\$	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17
Υı	T2	Т3	T4	TS	T6	177	78	Т9	T10	T11	T12	T13	T14	T15	T16	T17
UI	U2	U3	U4	U\$	U6	U7	U8	U9	UIO	UII	U12	U13	U14	UIŞ	U16	U17

Package name TFBGA241-P-1212-0.65A5

Pin Numbers and Names

A1	Pin No.	Pin name	Pin No.	Pin name	Pin No.	Pin name	Pin No.	Pin name	Pin No.	Pin name	
A3 P81/ANCI C17 T.DL/RODO G3 DUSS M1 PC0/TBTN/KEY20 R5 PO5/DS/ADS A4 P93/ANC3 D1 P72/MT11/ANA3 G4 P90/MTXDO M2 PC1/TCOUTO R8 P10/DE/ADE/ADS A5 VREPHIC D2 P72/MT10/ANA2 G5 NC M3 PC2/TCOUTT R8 P10/DE/ADE/ADS A6 PF3/KEY19/DACKI D3 P70/ANA0 G13 NC M4 PC3/TCOUTT R8 P20/AT6/ADT/BIND A7 PE6/KEY14 D4 AVSSC G14 P14/ADTRGO M5 NC R8 P23/AT6/ADT/BIND A8 PE1/KEY09 D5 DVSS G15 P13/PHCSN1 M13 DVCC3 R10 P22/A23/ADT/BIND A9 PD4/TBCOUT D6 PF6/KEY12/TACOUTG G16 P12/PHCSN0 M14 P34/INT16 R11 P42/C52/KEY26 A10 PD0/TMD00 D7 PF1/KEY12/TACN0 G17 DNT M15 P33/INT15 R11 P42/C52/KEY26 A11 PA4/INT4/TBSN0 D8 P64/KEY12 H1 DVCC3 M16 P22/INT14 R13 P50/AD.INTC A12 BVCC3 D9 PD1/ADTRGB H2 P91/ARXDO M17 PJ1/TB1IN11 R14 P50/AD.INTC A13 XT2 D10 P02/TBB0UT H3 P92/TBSOUT N1 PC4/SS/SSA R15 P63/AD.INTC A14 XT1 D11 PA3/PHC2IN1 H4 P92/TBSOUT N1 PC4/SS/SSA R15 P63/AD.INTC A15 X2 D12 PA3/INT3/PHC2IN1 H3 P50/AD.INTC N1 PC4/SSCK R15 P63/AD.INTC A16 X1 D13 P44/INT1C/TBSN0 N13 NC N4 DVCC3 T1 P54/AD.INTC A17 NC D14 TEST4 H14 NC N5 DVSS T2 TEST1 A18 X12 D10 P43/PHC2IN11 H15 P10/PHC4N1 N6 NC T3 P56/AD.INTC A19 P92/ANCS D15 P43/ANTB-TBAIN1 H15 P10/PHC4N0 N7 NC T4 P01/D1/AD1 A19 P92/ANCS D15 P43/ANTB-TBAIN1 H15 P10/PHC4N0 N7 NC T4 P01/D1/AD1 B10 P92/ANCS D15 P43/ANTB-TBAIN1 H15 P10/PHC4N0 N7 NC T4 P01/D1/AD1 B11 P36/ANCS D15 P43/ANTB-TBAIN1 H15 P10/PHC4N0 N7 NC T4 P01/D1/AD1 B12 P44/SCOCC E2 P74/ANB0 J1 P54/TM2 N9 DVSS T2 TEST1 B13 P80/ANCS E3 AVCCSS E3 P63/KEYS E3 P63/KEYS E3 P63/KEYS E3 P63/	A1	NC	C15	DVSS	GI	VREFLB	L16	PJS/INTS	R3	TESTO	
A4 P83/ANC3	A2	P84/AINC4	C16	PHS/INTID/TBBINI	62	AVSSB	L17	PJ5/INT17	R4	P02/D2/AD2	
AS VREPHC D2 P72/NT10/ABM2 GS NC M3 PC2/TCOUT1 R7 P14/D12/AD12/A12 A6 PF3/KEY19/DACK4 D3 PD7AINAO G13 NC M4 PC3/TCOUT2 R8 P20/A16/A/D18INI A7 PF6.KEY14 D4 AVSSC G14 P14/ADTRGC M5 NC R9 P24/A16/A/D18INI A8 PE1/KEY09 D5 DVSS G15 P14/PHCSINI M13 DVCC3 R10 P27/A22/A7/TSINI A9 PD4/TBCOUT D6 PF6/KEY12/TCOUT6 G16 P12/PHCSINI M13 DVCC3 R10 P27/A22/A7/TSINI A10 PD0/HTX02 D7 PF1/KEY17/DACK0 G17 DNT M15 P33/INT15 R11 P42/CS2/KEY26 A11 PA4/INT4/T86N0 D8 P64/KEY12 H1 DVCC3 M15 P33/INT15 R12 P59/A0/INT6 A12 EVCC3 D9 PD7/ADTRGB H2 P91/RXC00 M15 P12/INT14 R13 P59/A0/INT6 A13 XT2 D10 PD3/TBBOUT H3 P92/HSCUX/HCTSO M17 P14/TB11NI R14 R15 P59/A0/INT6 A14 XT1 D11 PA7/PHC2INI H4 P92/TB3OUT H2 PC5/SUSCL R16 P64/A6/RXC0/INTA A15 X2 D12 PA3/INT3/PHC2INI H4 P92/TB3OUT H2 PC5/SUSCL R16 P64/A6/RXC0/INTA A16 X1 D13 P44/INT1C/TE890 H13 NC N4 DVCC3 T1 P34/INISIGN/TECOUTT A17 NC D14 TEST4 H14 NC N5 DVCS T2 TEST3 A18 XFELC D16 RESET H14 NC N5 DVCS T2 TEST3 B1 P95/AINCS D15 P44/INT1B/TBAINI H15 P11/PHC4INI N6 NC T3 P96/RW/TCIN B2 VREFLC D16 RESET H16 P10/PHC4INO N7 NC T4 P01/D1/A01 B3 P92/AINCS D17 T00/TXD0 H17 E3E N8 NC T5 P07/D1/AD1 B4 P80/AINCS E1 P75/AINBI J1 P34/TXD2 N8 DVSS T6 P07/D1/AD1 B5 AVCC3C E2 P74/AINBI J2 P56/RCI2/TSS N11 NC T7 P13/D11/AD11/AD1 B6 P44/KEY2/TOCUTE E5 VREFLA J5 DVCC3 N14 PJ0/TB1NID T11 P34/TSD5UT T12 P34/RSD0UT T12 P34/AINBI T10 P36/AINST T10	A3	P81/AINCI	C17	TDL/FXXD0	63	DVSS	MI	PC0/TBTIN/KEY30	R5	P05/D5/AD5	
AS PF3/KEY19/DACK4 D3 P70/ABNA0 G13 NC M4 PC3/TCOUT2 R8 P20/A16/A0/TEBINO A7 PE6/KEY14 D4 AVSSC G14 PI4/ADTROC M5 NC R9 P23/A16/AJ/TEBINO R8 PE1/KEY19 D5 DVSS G15 PI3/PHCSINI M13 DVCC3 R11 P24/AJ/TEBINO A8 PD4/TBCOUT D6 PF6/KEY22/TCOUT6 G16 P12/PHCSINO M14 PJ4/INT16 R11 P42/CS2/KEY26 A10 P00/HTX02 D1 PF1/KEY17/DACK0 G17 DNT M15 PJ3/INT15 R12 P42/CS2/KEY26 A10 P00/HTX02 D1 PF1/KEY17/DACK0 G17 DNT M15 PJ3/INT15 R12 P42/CS2/KEY26 A11 PA4/INT16/TEBINO D1 P00/HTX02 D1	A4	P83/AINC3	D1	P73/INT11/AINA3	G4	P90/HTXD0	M2	PCI/TCOUTO	R6	P10/D8/AD8/A8	
A7 P66/KEY14 D4 AVSSC G14 P14/ADTRGC M5 NO R9 P23/A19/AJ/TB2INI	A5	VREFHC	D2	P72/INT10/AINA2	G5	NO	М3	PC2/TCOUT1	R7	P14/D12/AD12/A12	
A8 PEL/XEYU9 D5 DVSS G15 PI3/PHC5NN1 M13 DVCC3 R10 P27/A22/A7/TBSINI A9 PO4/TBCOUT D6 PF6/KEY22/TODACK G16 P12/PHC5NO M14 P.J4/INT16 R11 P42/CS2/KEY20 A10 P04/TXD2 D7 PF1/KEY17DACKO G17 DNT M15 P.J2/INT15 R11 P42/CS2/KEY20 A11 PA4/INT4/TB6NO D8 PF4/KEY12 H1 DVCC3 M16 P.J2/INT14 R13 P50/A0/INTC A12 BVCC3 D9 P07/ADTR60 H2 P91/FRCXD M17 PJ1/TB1ININ R14 P50/A0/INTC A13 XT2 D10 P03/TB8DUT H3 P92/FSCXD/ACTS0 N1 P04/SO/SDA R15 TEST3 A14 XT1 D11 PA7/PHC2INI H4 P92/TB9UT N2 PC5/S/SCK R17 P94/AB/TXDO/INTA A15 X2 D12 PA3/INT3/PHCINI H5 NC N3 PC6/SCK R17 P94/AB/TXDO/INTA A16 X1 D13 P94/INT3/PHCINI H5 NC N3 PC6/SCK R17 P94/AB/TXDO/INTA A17 NC D14 TEST4 H14 NC N5 DVSS T2 TEST1 B1 P95/ANC5 D15 P43/INT16/TBAN1 H15 P11/PHC4NI N6 NC T3 P36/RN/TC2NI B2 VREFLC D16 RESET H16 P10/PHC4NI N7 NC T4 P01/D1/AD1 B3 P32/ANC2 D17 TD0/TXDO H17 EJE N8 NC T5 P04/D4/AD4 B4 P30/ANC0 E2 P74/ANB0 J2 P95/RXD2 N10 NC T7 P13/D11/AD11/AD1 B6 P47/KEY20/TCOUT4 E3 AVCC3B J3 P96/SCXP2/TS22 N11 NC T7 P13/D11/AD11/AD1 B6 P47/KEY20/TCOUT4 E3 AVCC3B J3 P96/SCXP2/TS22 N11 NC T7 P13/D11/AD11/AD1 B7 P45/RYB15 E4 AVCC3A J4 P39/TBAOUT N12 REGTEST3 T9 P22/AB/T2B1ND B1 PA5/INT5/TB6NN E8 PE5/KEY13 J5 P06/REY06 N16 P84/AB/CEXI/ACTES N11 P41/TSC3 B1 PA5/INT5/TB6NN E8 PE5/KEY13 J5 P06/REY06 N16 P84/AB/CEXI/ACTES N11 P41/TSC3 P07/D7/AD7 B1 PA5/INT5/TB6NN E8 PE5/KEY13 J5 P06/AEY06 N16 P84/AB/CEXI/ACTES N11 P41/TSC3 P43/SCOUT5 B11 PA5/INT5/TB6NN E8 PE5/KEY13 J5 P06/AEY06 N16 P84/AB/CEXI/ACTES N19 P36/AB/CEXI/ACTES B15 REGTEST2 E12 DVCC3 N16 P06/AEY06 N16 P84/AB/CEXI/ACTES N16 P06/AEY06 N16 P	A6	PF3/KEY19/DACK4	D3	P70/AINA0	G13	NC	M4	PC3/TCOUT2	R8	P20/A16/A0/TB1IN0	
AS PD4/TBCOUT D6 PF6/KEY22/TCOUT6 G16 P12/PHCSINO M14 PJ4/INT16 R11 P42/CS2/KEY26 A10 P00/HTX02 D7 PF1/KEY17/DACKO G17 DNTY M15 PJ3/INT15 R12 P43/BUSMD A11 PJ4/INT1/TBSIND D8 PF4/KEY12 H1 DVCG3 M16 PJ2/INT14 R13 P50/A0/INTC A12 BVCG3 D9 PD7/ADTRGB H2 P91/HRXDO M17 PJ1/TB11IN1 R14 P53/A3/INTF A13 XT2 D10 P00/TBBOUT H3 P92/HSCLMO/HCTSO N1 PC4/SO/SOA R15 TEST3	A7	PE6/KEY14	D4	AVSSC	G14	PI4/ADTRGC	M5	NC	R9	P23/A19/A3/TB2INI	
A10 POD/HTX02 D7 PF1/KEY17/DACKO G17 DINT M15 PJ3/INT15 R12 P45/BUSMD	A8	PE1/KEY09	D5	DVSS	G15	PI3/PHC5IN1	M13	DVCC3	R10	P27/A23/A7/TB5IN1	
A11 PA4/INT4/TB6INO D8	A9	PD4/TBCOUT	D6	PF6/KEY22/TCOUT6	G16	PI2/PHC5IN0	M14	PJ4/INT16	R11	P42/CS2/KEY26	
A12 BVCC3 D9 PD7/ADTRGB H2 P91/HPXDD M17 PJ1/TB1INI R14 PS3/AJ/INTF A13 XT2 D10 PD3/TBB0UT H3 P92/HSCLM/HCTSD N1 PC4/SO/SDA R15 TEST3 A14 XT1 D11 PA3/PHC2INI H4 P92/TB9UT N2 PC5/SS/SDA R15 TEST3 A15 X2 D12 PA3/INT3/PHC2INI H5 NC N3 PC6/SCK R17 P96/AB/TXDO A16 X1 D13 PH4/INT1C/TBBND H13 NC N4 DVCC3 T1 P34/HBLERA/TREDIT A17 NC D14 TEST4 H14 NC N5 DVSS T2 TEST1 A18 P85/AINC5 D15 PH3/INT16/TBBND H13 NC N5 DVSS T2 TEST1 B1 P85/AINC5 D15 PH3/INT16/TBAIN1 H15 P11/PHC4INI N6 NC T3 P36/RNV/TC2IN B2 VFEFLC D16 FESET H16 P10/PHC4INO N7 NC T4 P01/D1/AD1 B3 P82/AINC2 D17 TD0/TXDO H17 E.SE N8 NC T5 P04/D4/AD4 B4 P80/AINC0 E1 P75/AINB1 J1 P94/TXD2 N9 DVSS T6 P07/D7/AD7 B5 AVCC3C E2 P74/AINB0 J2 P95/RXD2 N10 NC T7 P12/D11/AD11/A11 B6 PF4/KEY2D/TC0UT4 E3 AVCC3B J3 P98/SCLX2/CTS2 N11 NC T3 P17/D15/AD15/A15 B7 FE7/KEY15 E4 AVCC3A J4 P97/TBAOUT N12 REGTEST3 T9 P22/A18/A2/TB2INB B8 PE2/KEY10 E5 VREFLA J5 DVCC3 N12 DVSS T10 P26/A2/A6/TBSNO B9 PD5/TBDOUT E6 PF7/KEY23/TCOUTJ J13 DVCC3 N12 DVSS T10 P26/A2/A6/TBSNO B10 PD2/HSCLX2/HCTS2 E7 PF2/KEY13 J15 P06/KEY05 N17 P85/A18/SCLX1/CTS2 T11 P41/CS1/KEY25 B10 PD2/HSCLX2/HCTS2 E7 PF2/KEY13 J15 P06/KEY05 N17 P85/A18/HCTST1 T11 P41/CS1/KEY25 B16 PA4/INTI/PHC08N E9 PE6/KEY03 J16 PD5/KEY05 N17 P85/A18/FIBOUT T12 P44/SCOUT B17 PA5/INTS/TB8N1 E8 PE6/KEY13 J15 P06/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBNO B18 REGTEST2 E12 DVCC3 K2 P98/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA4/INTI/PHC08N E9 PE6/KEY08 J16 PD5/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA4/INTI/PHC08N E9 PE6/KEY03 J15 P06/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA6/INTI/PHC08N E9 PE6/KEY03 J15 P06/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA6/INTI/PHC08N E9 PE6/KEY03 J15 P06/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA6/INTI/PHC08N E9 PE6/KEY03 J15 P06/KEY05 N17 P85/A18/RD1/INTIB T14 P82/A2/TBBOUT B19 PA6/INTI/PHC08N E9 PE6/KEY03 J15 P06/KEY05 P17 P06/B2/A1/A1/BBOUT P2 P06/B2/A1/A1/BBOUT P2 P06/B2/A1/A1/BBOUT P3 P37/A1/BBOUT/A1/BBOUT/A1/BBOUT P3 P06/A1/A1/BBOUT P3 P37/A1/BBOUT/A1/BBOUT	A10	PD0/HTXD2	D7		G17		M15	PJ3/INT15	R12	P45/BUSMD	
A13 XT2 D10 PD3/TBBOUT H3 P92/HSCLXO/HCTS0 N1 PC4/SO/SDA R15 TEST3 A14 XT1 D11 PA7/PHC2IN1 H4 P92/TBSOUT N2 PC5/SL/SQL R16 P91/A9/RXDO/NTA A15 X2 D12 PA3/INT3/PHC2IN1 H5 NC N3 PC6/SCK R17 P60/A8/TXDO/NTA A16 X1 D13 PH4/INT1C/TBBND H13 NC N4 DVCG3 T1 P34/INT1G/TBRDD A16 X1 D13 PH4/INT1C/TBBND H13 NC N4 DVCG3 T1 P34/INT1G/TBRDD A17 NC D14 TEST4 H14 NC N5 DVSS T2 TEST1 B1 P85/AINC5 D15 PH3/INT1B/TBAIN1 H15 PH1/PHC4IN1 N6 NC T3 P34/INT/CZIN B2 VPEFLC D16 RESET H16 P10/PHC4IN0 N7 NC T4 P01/D1/A/D1 B3 P82/AINC2 D17 TD0/TXD0 H17 EJE N8 NC T5 P04/D4/AD4 B4 P80/AINC0 E1 P75/AINB1 J1 P94/TXD2 N9 DVSS T6 P07/D1/A/D1 B5 AVCG3C E2 P74/AINB0 J2 P95/RXD2 N10 NC T7 P12/D1/A/D1/A11 B6 PF4/KEY20/TCOUT4 E3 AVCG3B J3 P98/SCLXZ/CTS2 N11 NC T8 P17/D15/AD15/A15 B7 PE7/REY15 E4 AVCC3A J4 P97/TBAOUT N12 REGTEST3 T9 P22/A18/A2/TB2IN3 B8 PE2/KEY10 E5 VFEFLA J5 DVCG3 N13 DVSS T10 P26/A2Z/A6/TBSIN0 B9 PD5/TBDOUT E6 PF7/KEY23/TCOUT7 J13 DVCG3 N14 P30/TBIIND T11 P44/SCJWZ-T821N3 B10 PD2/HSCLX2/HCTS2 E7 PF2/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSIN0 T11 P24/TXD2 N15 P67/A15/TBSIN0 T11 P44/SCJWZ-T821N3 B10 PD2/HSCLX2/HCTS2 E7 PF2/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSIN0 T11 P44/SCJWZ-T821N3 B11 PA3/INT3/TBBN1 E8 PE5/KEY18 J15 PG6/KEY05 N16 P63/AA/ACKA/CCTA/T18 T11 P44/TSDUT N12 P44/SCOUT B11 PA3/INT3/TBBN1 E8 PE5/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/TBBN1 E8 PE5/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/TBBN1 E8 PE5/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/HBBN1 E8 PE5/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/HBBN1 E8 PE5/KEY18/DREQ4 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/HBBN1 E8 PE5/KEY18/DREQ64 J14 PG7/KEY07 N15 P67/A15/TBSOUT T12 P44/SCOUT B11 PA3/INT3/HBBN1 E8 PE5/KEY18/DREQ64 J14 PG7/KEY07 N15 P65/A13/TBSOUT T12 P44/SCOUT B12 PA1/INT1/PHC08N1 E9 PG9/KEY08 J15 P65/KEY07 N17 P65/A13/TBSOUT T12 P44/SCOUT B13 PA3/INT3/HBBN1 E8 PE5/KEY18/DREQ64 J14 PG7/KEY07 P13 P65/A13/TBSOUT T12 P44/SCOUT		PA4/INT4/TB6IN0	D8		HI	DVCC3	-	PJ2/INT14	R13	P50/A0/INTC	
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G14 PRO/ENTIE/ 160800 PT/ TCK L15 PG//ENT/ R2 PSS/WAIT/RDY G16 PS6/A6/18200T/KEYS			_								
U17 NC	014	PHO/INTTE/TBOING	F17	TCK	L15	P3//N17	RZ	P33/WATI/RDY	-		

Development Systems

Software Products

	(Compiler	SW1ACN0-ZCC: 1 license SW1ACN3-ZCC: 10 licenses
Toshiba Integrated Development Environment		SW00MN0-ZCC: 1 license SW00MN3-ZCC: 10 licenses The emulator comes with a single-seat download license.

Hardware Products Emulator

On-Chip Debug Emulator HW19DG100AG

- * As to hardware products, additional accessories are also needed.
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