

	Timing Card Devices				Line Card Devices		
	ZL30100	ZL30101	ZL30102	ZL30105	ZL30108	ZL30106	ZL30410
Name	DS1/E1 System Synchronizer	DS1/E1 Stratum 3 System Synchronizer	DS1/E1 System Synchronizer for Redundant Clocks	SDH/PDH System Synchronizer for Redundant System Clocks	SONET/SDH Network Interface DPLL	SONET/SDH/PDH Network Interface DPLL	Multi-Service Line Card PLL
Application	Stratum 4/4E timing control for T1/E1 systems (ideal for pizza box systems)	Stratum 3 timing control for T1/E1 systems (ideal for pizza box systems)	Redundant Timing Control for T1/E1 systems (meets H.110 timing card requirements)	Redundant Stratum 3 Timing Control for T1/E1 systems (meets H.110 and Advanced TCA timing card requirements)	SONET/SDH Line Cards	SONET/SDH/PDH Line Cards	SONET/SDH/PDH Line Cards
# Of Input References	2	2	3	3	2	3	2
Syncs to clock and sync pair	No	No	Yes	Yes	No	Yes	No
Input Reference frequencies	8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz	8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz	8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz	2kHz, 8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz, 19.44MHz	2kHz, 8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz, 19.44MHz	2kHz, 8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz, 19.44MHz	8kHz 1.544MHz, 2.048MHz, 8.192MHz, 16.384MHz, 19.44MHz
Manual hitless reference switching	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automatic hitless reference switching	No	No	Yes	Yes	No	Yes	No
Frequency Monitoring	+/- 83ppm +/- 130ppm	+/- 12ppm	+/- 83ppm +/- 130ppm	+/-12 ppm +/-83ppm +/-130ppm	+/-52 ppm +/-83ppm	+/-52 ppm +/-83ppm	+/-12 ppm
Holdover Accuracy	0.15 ppm	0.01 ppm	0.1 ppm	0.01 ppm	0.1 ppm *	0.1 ppm	0.00007 ppm
Output clock frequencies	1.544MHz, 2.048MHz, 4.096MHz, 8.192MHz, 16.384MHz, 32.768MHz, 65.536MHz	1.544MHz, 2.048MHz, 4.096MHz, 8.192MHz, 16.384MHz, 32.768MHz, 65.536MHz	1.544MHz, 2.048MHz, 3.088MHz, 4.096MHz, 6.312MHz, 8.192MHz, 16.384MHz, 32.768MHz, 65.536MHz,	1.544MHz, 3.088MHz, 2.048MHz, 4.096MHz, 8.192MHz, 16.384MHz, 32.768MHz, 65.536MHz, 19.44MHz 6.312MHz(DS2), 8.448MHz(E2), 44.736MHz(DS3), 34.368MHz(E3)	19.44MHz	1.544MHz, 3.088MHz, 2.048MHz, 4.096MHz, 8.192MHz, 16.384MHz, 32.768MHz, 65.536MHz, 19.44MHz 6.312MHz(DS2), 8.448MHz(E2), 44.736MHz(DS3), 34.368MHz(E3)	1.544MHz, 2.048MHz, 4.096MHz, 8.192MHz, 16.384MHz, 19.44MHz 6.312MHz(DS2), 44.736MHz(DS3), 34.368MHz(E3) 155.52MHz
8kHz Frame Pulses (# of styles)	5	5	5	5	1	5	3
2kHz multi-frame pulse	No	No	No	Yes	Yes	Yes	No
Loop filter bandwidth	1.8Hz or 922Hz	1.8Hz or 922Hz	1.8Hz	1.8Hz, 3.6Hz or 922Hz	29Hz	29Hz or 922Hz	6Hz or 12Hz
Lock indication	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fastlock	Yes	Yes	Yes	Yes	Automatic	Automatic	Automatic
JTAG	Yes	Yes	Yes	Yes	No	Yes	Yes
Package	64 pin TQFP	64 pin TQFP	64 pin TQFP	64 pin TQFP	32 pin QFN	64 pin TQFP	80 pin LQFP
Package Size	10 x 10mm	10 x 10mm	10 x 10mm	10 x 10mm	5 x 5mm	10 x 10mm	14 x 14mm
GR-1244-CORE Stratum 3	No	Yes	No	Yes	No	No	No
GR-1244-CORE Stratum 4/4E	Yes	Yes	Yes	Yes	No	No	Yes
GR-253-CORE OC-3 Jitter compliance only	No	No	No	Yes	Yes	Yes	Yes
ITU-T G.813 Option 1	No	No	No	Yes	No	No	Yes
ITU-T G.813 STM-1 Jitter compliance only	No	No	No	Yes	Yes	Yes	Yes
ITU-T G.823, G.824	Yes	Yes	Yes	Yes	No	No	Yes
ANSI T1.403	Yes	Yes	Yes	Yes	No	No	Yes
ETSI 300 011	Yes	Yes	Yes	Yes	No	No	Yes

All devices are controlled through a simple hardware control interface

* The ZL30108 does not have a holdover mode. It has a holdover state which is normal mode with automatic holdover. In such a case the holdover accuracy is 0.1ppm