ANRITSU

MU181020A-001

The Anritsu MU181020A-001 is a 12.5 Gbit/s Pulse Pattern Generator module with a built-in narrowband clock generator, designed for use within the MP1800A Signal Quality Analyzer (SQA) mainframe. This module provides versatile pattern generation, including PRBS, DATA, zero-substitute, and mixed patterns, serving as a high-precision signal source for bit error rate (BER) and digital signal quality measurements.

SPECIFICATIONS

Frequency

Minimum Frequency	9.8 GHz Hz
Maximum Frequency	12.5 GHz Hz
Frequency Resolution	1 kHz (1 kbit/s step)

General

Reference Oscillator	Built-in Synthesizer (Internal Clock Option 001)
Interfaces	MP1800A proprietary module bus interface

Physical

Power Supply	Supplied by the MP1800A mainframe chassis
Dimensions (W×H×D)	21.5 mm × 115.5 mm × 241 mm (excluding projections) mm
Weight	≤ 0.8 kg kg

Frequency Specifications

Operating Bit Rate Range	9.8 Gbit/s to 12.5 Gbit/s

Pattern Generation

PRBS Patterns	2^n - 1 (n = 7, 9, 10, 11, 15, 20, 23, 31)
Zero-Substitute Patterns	2^n, 2^n - 1 (n = 7, 9, 10, 11, 15, 20, 23)
Zero-Substitute Continuity	Continuous 0s or 1s appended to PRBS signals + 1 bit
DATA Pattern Length	Maximum 128 Mbits (1 bit steps)
Alternate Pattern Mode	Two types of pattern (A and B) using internal/external control timing alternately
Mixed Pattern Mode	Mixture of DATA and PRBS pattern
Sequence Pattern Mode	Several provided programmable patterns in set sequence

Output Specifications

Number of Channels	1 Channel (differential)
Output Signals	DATA, xDATA, CLK, xCLK
Data Output Amplitude	0.5 Vp-p to 2.0 Vp-p
Clock Output Amplitude	0.5 Vp-p to 2.0 Vp-p
Data/Clock Amplitude Resolution	10 mV
Data/Clock Rise/Fall Time (20% - 80%)	≤ 25 ps (typical 18 ps)
Random Jitter	≤ 1 ps rms (typical 500 fs)
Data/Clock Output Impedance	50 Ω
Output Offset Range	-2.0 V to +3.3 V
Waveform Distortion	≤ 10%

System Compatibility

Series Compatibility	Anritsu MP1800 Series
Host Mainframe Requirements	MP1800A Signal Quality Analyzer

Inputs & Outputs

Output Connector	SMA female

Environmental

Operating Temperature Range	+5°C to +40°C

External Clock Input

External Clock Input Frequency	0.1 GHz to 12.5 GHz
External Clock Input Amplitude	0.3 Vp-p to 1.0 Vp-p
External Clock Input Impedance	50 Ω (AC coupled)
External Clock Input Connector	SMA female

Sync Output

Sync Output Channels	1 (Single-ended)
Sync Output Amplitude	0.5 Vp-p to 1.5 Vp-p
Sync Output Division Ratio	1/1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128
Sync Output Connector	SMA female

Pattern Trigger Output

Trigger Output Channels	1 (Single-ended)
Trigger Output Amplitude	0.5 Vp-p
Trigger Output Connector	SMA female

TECHNOLOGY

Pulse Pattern Generator

APPLICATIONS

Bit error rate (BER) testing and digital signal quality analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.