



# OPTIMOD Trio, 5750 and 5950 Comparison

Revised 16 April 2024

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>Rack space required</i>	1u	1u	1u
<i>Construction</i>	Large board DSP mounted on standoffs inside chassis	Large board DSP mounted on standoffs inside chassis	Large board DSP mounted on standoffs inside chassis
<i>Display</i>	Full Color High Density 6.6" Diagonal Single Touch LCD Touchscreen	Full Color High Density 6.6" Diagonal Single Touch LCD Touchscreen	Full Color High Density 6.6" Diagonal Single Touch LCD Touchscreen
<i>User Interface</i>	Touchscreen and HTML5	Touchscreen and HTML5	Touchscreen and HTML5
<i>Front panel security lockout</i>	Yes, include display dim mode	Yes, include display dim mode	Yes, include display dim mode
<i>Meters always visible during processing adjustments</i>	Yes	Yes	Yes
<i>MX Peak Limiter Technology</i>	No	No	Yes
<i>Number of DSP's</i>	4	6	8
<i>Loudness capability for given artifact level (re 8200)</i>	+2.5 dB	+2.5 dB	+2.5 dB. 3dB more HF energy; more transient punch
<i>Number of Audio Processing Structures</i>	(4) Five-Band, Low-Latency Five-Band, Ultra-Low-Latency Five-Band and Two-Band	(4) Five-Band, Low-Latency Five-Band, Ultra-Low-Latency Five-Band and Two-Band	(6) Five-Band, Low-Latency Five-Band, Ultra-Low-Latency Five-Band, MX Five-band, Two-Band and MX Two-band
<i>Audio Processing Latency</i>	4, 12, 17, 22 ms depending on preset/processing structure	4, 12, 17, 22 ms depending on preset/processing structure	4, 12, 17, 22, 265, 270 ms depending on preset/processing structure

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>Activating Ultra-Low Latency Structure (4 ms delay)</i>	DSP code reload with ~3-second audio mute	DSP code reload with ~3-second audio mute	DSP code reload with ~3-second audio mute
<i>Stand-alone stereo encoder mode available</i>	Yes, In a future Release	No	No
<i>Low-Latency Monitor Output</i>	Yes; 4 ms; taken from multiband compressor output	Yes; (1) 4 ms; taken from multiband compressor output, (2) 6 ms; includes complete FM processing chain for better air-sound simulation	Yes; (1) 4 ms; taken from multiband compressor output, (2) 6 ms; includes complete FM processing chain for better air-sound simulation
<i>Levels of preset customization</i>	Basic from front panel, advanced available only from PC Remote application	Basic from front panel, advanced available only from PC Remote application	Basic from front panel, advanced available only from PC Remote application
<i>Number of user presets</i>	Essentially unlimited	Essentially unlimited	Essentially unlimited
<i>2-band gated AGC</i>	Yes	Yes	Yes
<i>AGC Window gating</i>	Yes	Yes	Yes
<i>Dual-Mono AGC</i>	Yes	Yes	Yes
<i>Sum-and-difference processing available on AGC</i>	Yes	Yes	Yes
<i>Stereo Enhancer</i>	Orban 222-style only	Orban 222 and "Delay" style	Orban 222 and "Delay" style
<i>Bass Shelving EQ</i>	6, 12, 18 dB/octave	6, 12, 18 dB/octave	6, 12, 18 dB/octave
<i>Parametric EQ</i>	3-band	3-band	3-band
<i>DJ Bass Boost</i>	Yes	Yes	Yes
<i>Brilliance Control</i>	Yes	Yes	Yes
<i>Program-adaptive HF Enhancer</i>	Yes	Yes	Yes
<i>Subharmonic Synthesizer</i>	No	No	Yes, between 60 to 120 Hz or 50 and 90 Hz
<i>Speech/music detector automatically optimizes processing for input material</i>	Yes	Yes, advanced	Yes, advanced

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>Downward Expander, single-ended noise reduction system</i>	Yes	Yes	Yes
<i>Dual Mono Multiband Compressor</i>	Yes	Yes	Yes
<i>Number of bands in multiband compressor</i>	2, 5	2, 5	2, 5
<i>Compressor Look-ahead processing</i>	Yes	Yes	Yes
<i>Program-adaptive clipping distortion controller</i>	Yes	Yes	Yes; MX technology is more advanced
<i>Bass clipper modes (non-MX)</i>	Soft, Medium, Hard, LL Hard	Soft, Medium, Hard, LL Hard	Soft, Medium, Hard, LL Hard
<i>Bass clipper threshold control</i>	Yes	Yes	Yes
<i>Bass clipper shape control</i>	Yes	Yes	Yes
<i>MX bass pre-limiting modes</i>	No	No	Soft, medium, hard
<i>MX bass pre-limiter shape control</i>	No	No	Yes, Program adaptive, not requiring a control. It works in Hard Mode only
<i>Patented anti-aliased clippers and overshoot compensator</i>	Yes	Yes	Yes
<i>Exclusive "Multipath Mitigator" Phase Corrector for FM and HD</i>	No	No	Yes
<i>Patented non-clipping composite limiter</i>	Yes; dual-mode	Yes; dual-mode	Yes; dual-mode
<i>SSB (compatible single side- band/vestigial sideband modulation)</i>	Yes	Yes	Yes
<i>DAB+ / HD radio /Netcast Processing Chain architecture</i>	No (except for built-in diversity delay)	Processing chains are independent except for AGC	Processing chains are independent except for AGC
<i>HD Look-ahead Limiter implements "true peak" Control</i>	NA	Yes	Yes

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>Built-in HD Radio Diversity Delay</i>	Up to 16 seconds	Up to 12 seconds	Up to 12 seconds
<i>Configurable Split Delay FM and digital radio channels</i>	NA	FM: up to 8 seconds DAB: up to 6 seconds	FM: up to 8 seconds DAB: up to 6 seconds
<i>FM ITU-R BS. 412-9 controller</i>	Yes, with selectable program adaptive modes	Yes, with selectable program adaptive modes	Yes, with selectable program adaptive modes
<i>ITU-R BS.1770 / R-128 configurable FM Loudness Control</i>	Yes; user adjustable -31 to -5 LKFS/LUFS	Yes; user adjustable -31 to -5 LKFS/LUFS	Yes; user adjustable -31 to -5 LKFS/LUFS
<i>Combined control of ITU-R BS.1770 / R-128 and ITU-R BS. 412-9 for FM</i>	No	Yes	Yes
<i>FM ITU-R BS. 412-9 measurement tools</i>	Yes	Yes	Yes
<i>ITU-R BS.1770 / R-128 Short-Term and Integrated Loudness Meters</i>	No	Separate measurement tools for digital and analog radio processing chains	Separate measurement tools for digital and analog radio processing chains
<i>ITU-R BS.1770 / R-128 configurable HD/streaming Loudness Control</i>	No	Yes; user adjustable between -31 to -11 LKFS/LUFS	Yes; user adjustable -31 to -11 LKFS/LUFS
<i>Audio Input</i>	1x Analog, 2x AES3, 2x AoIP	1x Analog, 2x AES3, 2x AoIP	1x Analog, 2x AES3, 2x AoIP
<i>Audio Output</i>	1x Analog, 2x AES3, 2x AoIP	Analog, 2x AES3, 4x AoIP	Analog, 2x AES3, 4x AoIP
<i>Audio-Over-IP</i>	AES67/SMPTE ST-2110-30 -or- Dante-enabled devices and AES67 /SMPTE ST2110-30 (SAP)	AES67/SMPTE ST-2110-30 -or- Dante-enabled devices and AES67 /SMPTE ST2110-30 (SAP)	AES67/SMPTE ST-2110-30 -or- Dante-enabled devices and AES67 /SMPTE ST2110-30 (SAP)
<i>Redundant AoIP</i>	No; 1x RJ45	Yes; 2x RJ45	Yes; 2x RJ45
<i>Relay Bypass</i>	Configurable for Analog, AES3 digital, and composite sections	Configurable for Analog, AES3 digital, and composite sections	Configurable for Analog, AES3 digital, and composite sections
<i>External Sync Input</i>	AES11 on XLR, AoIP, Wordclock or 10 MHz on BNC	AES11 on XLR, AoIP, Wordclock or 10 MHz on BNC	AES11 on XLR, AoIP, Wordclock or 10 MHz on BNC

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>19 kHz Pilot frequency sync</i>	AES11id, 1x Wordclock, 10 MHz on BNC	AES11id, 1 x Wordclock, 10 MHz on BNC	AES11id , 1 x Wordclock, 10 MHz on BNC
<i>19 kHz Pilot reference output</i>	Yes; SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; analog SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input
<i>Analog Composite Out &amp; SCA inputs</i>	2 Composite In, 2 SCA In	2 Composite In, 2 SCA In	2 Composite In, 2 SCA In
<i>AES3 Composite MPX</i>	Yes, 2 configurable 384/192 kHz compatible outputs	Yes, 2 configurable 384/192 kHz compatible outputs	Yes, 2 configurable 384/192 kHz compatible outputs
<i>RDS/RBDS Static Encoder</i>	Yes	Yes	Yes
<i>RDS/RBDS Dynamic Encoder and UECP compliant</i>	Yes	Yes	Yes
<i>*Optional Internal Ratings Encoder(s)</i>	Yes, 1	Yes, 2	Yes, 2
<i>External Ratings Encoder Loophrough between processing and stereo coder</i>	Yes	Yes	Yes
<i>External Ratings Encoder Loophrough between AGC and Dual-band / Multi-band processing</i>	Yes	Yes	Yes
<i>Advanced Programmable Silence Sense Detector with silence alarm</i>	Yes	Yes	Yes
<i>Configurable Remote Interface Connector (DB-25)</i>	8 in-2 Out GPI, Ethernet	8 in-2 Out GPI, Ethernet	8 in-2 Out GPI, Ethernet
<i>Remote protocol</i>	TCP/IP via Ethernet	ASCII, TCP/IP	ASCII, TCP/IP
<i>Secure SSH Remote Network Service</i>	Yes	Yes	Yes
<i>SNMPv2 Network Management Protocol</i>	Yes	Yes	Yes
<i>Programmable Silence Alarm and Digital Audio Fault Tally Outputs and SNMP</i>	Yes	Yes	Yes

<b>Feature</b>	<b>Trio-FM</b>	<b>5750</b>	<b>5950</b>
<i>Software upgrade</i>	Internet download or USB	Internet download or USB	Internet download or USB
<i>Backup and Restore Management</i>	Yes	Yes	Yes
<i>Real Time Clock Preset automation by time of day</i>	Yes	Yes	Yes
<i>Synchronize Clock to a Network Time Server</i>	Yes	Yes	Yes
<i>Dual-redundant power supply with auto-failover</i>	Yes	Yes	Yes
<i>*Optional IP streaming for monitoring on several stages and remote processor adjustment</i>	Yes: (Optional) Built-in streaming encoder; includes OPUS, MP3	Yes: (Optional) Built-in streaming encoder; includes OPUS, MP3, FLAC codecs	Yes: (Optional) Built-in streaming encoder; includes OPUS, MP3, FLAC codecs
<i>*Optional IP streaming decoder for backup purposes.</i>	Yes: OPUS, MP3	Yes: OPUS, MP3	Yes: OPUS, MP3
<i>*Optional Internal Audio Player for backup purposes.</i>	Yes	Yes	Yes

(\*) depends on optional software configuration