RF Converter

WISI COMPACT HEADEND
Channel Processing

· Conversion of one analog TV channel
  in the range of 45–862 MHz
· Automatic gain control in the level range
  50–90 dBμV
· Deactivation of AGC for standard L
  (manual gain adjustment)
· High IF selection via two SAW filters
  thereby adjacent channel operation at
  input and output

Module	OH 45 Channel Converter
Input frequency range	45–862 MHz
Input frequency steps	250 kHz
Input channel bandwidth	7/8 MHz
Input level range	50–90 dBμV
AGC range	≥ 40 dB
Output frequency range	45–862 MHz
Frequency steps	250 kHz
Output channel bandwidth	7/8 MHz
Output level (1 dB steps)	95–105 dBμV
Group delay (-0,5….4,43 MHz)	<80 ns
S/N video (CCIR-rec. 567-1)	>58 dB
S/N audio (color test pattern)	>50 dB
Stability of output level	± 1 dB
Spurious inside TV channel	>55 dB
Spurious outside a TV channel	>55 dB
Connectors RF input/ RF output	F-connector
Current consumption	0,5 A/12 V
Power consumption OH 45 module	< 10 W
Operating temperatur range	-20 °C to + 55 °C

**Accessoires for OH 50 –
the scope of delivery includes**

Wall mounting bracket/19" installation kit
· Rail-type bracket for wall mounting or 19"
  cabinet mounting

WIZARD
· For configuring the OH 50 basic unit and
  the modules using a PC
  The settings are uploaded to the basic unit
  through the USB interface using a USB
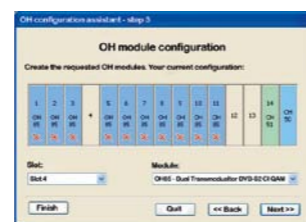 stick. This guarantees a quick and easy
  startup.

Accessoires – optional

OH 41 Handset
· Programming of parameters
· With a data memory, illuminated display
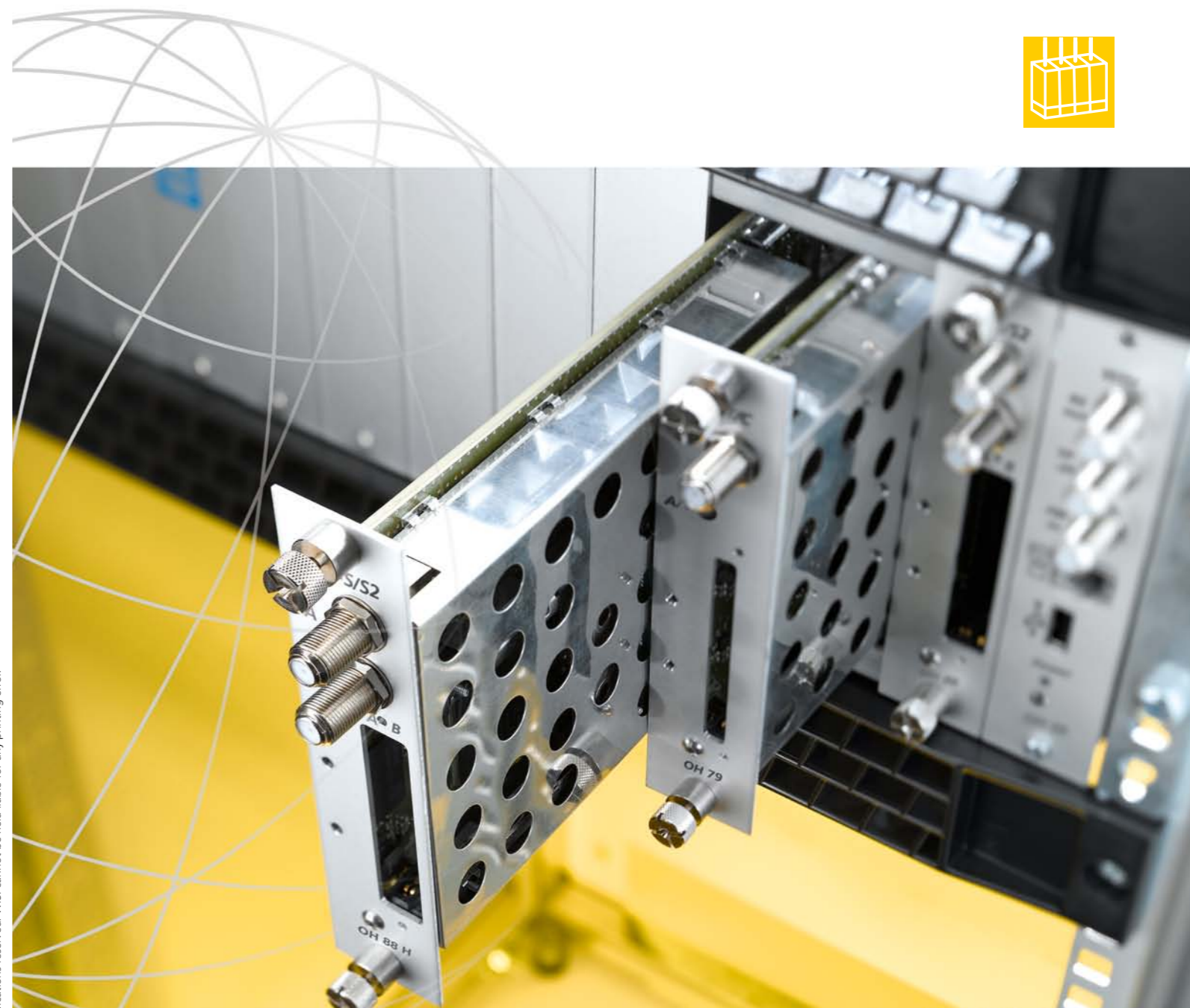 and LED lighting

OH 51 Remote monitoring module
· For programming and monitoring system
  parameters, for example in hotels or
  residences, with a self-explanatory
  German/English user interface
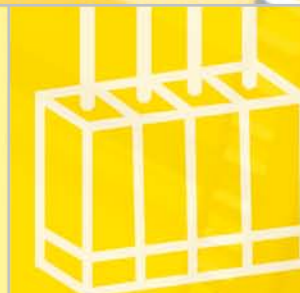· Monitoring up to 2 basic units with
  1 module

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excellence in digital …

excellence in digital …

Communication

Communication defines our everyday life, informs us, imparts knowledge and experience. It supports our understanding and helps us solving problems.

WISI's highly-motivated staff is fully committed to provide you with the state-of-the-art technology for communication today and tomorrow.

The new
WISI COMPACT HEADEND
Compact, strong and extremely flexible

Powerful technology, compact dimensions, modular and flexibly expandable; the new **WISI COMPACT** HEADEND System OH combines all the advantages of an innovative and affordable headend.

WISI COMPACT HEADEND is easily tailored with up to 14 modules and thus offers optimum channel processing for up to 14 analog and 28 digital channels in a 3 HU 19" rack chassis.

Through its integrated USB connection, the head end system allows pre-programming and facilitates the programming of multiple basic units. The USB connection can also be used to execute software updates.

KLASSE A CLASS

Thermally optimised housing

Local serial interface to configure the OH 51 module

RF output

-20 dB test point

Additional FM input

Plug slots for up to 14 twin modules

Ethernet interface to control the headend by a Web browser or a management system (SNMP)

Connection for OH 41 handset, easy to program

USB update interface (for USB stick)

Easy Wall or Rack Mounting

The **WISI COMPACT** HEADEND System OH is pre-equipped both for wall installation and for installation in a 19" rack. The material required for installation is already furnished with the basic unit so that a simple installation and configuration of the system is guaranteed.
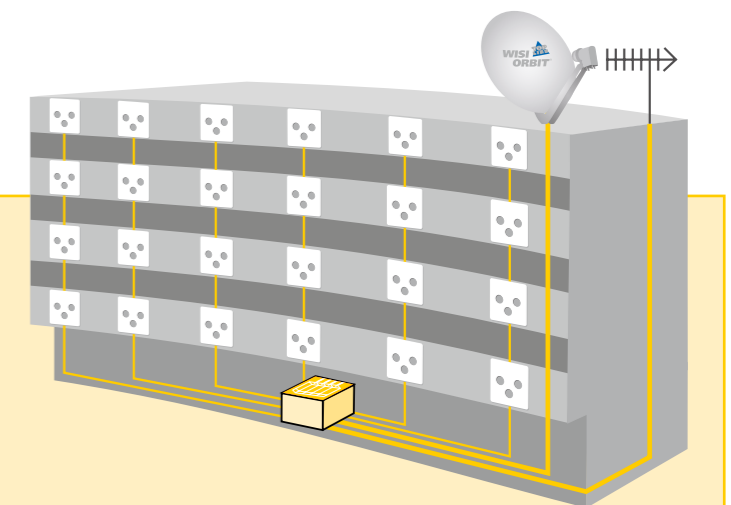

Rack mounting   **Wall mounting**

KLASSE A CLASS

With the high output level of 110 dBµV, the new **WISI COMPACT** HEADEND System OH is best suited for use in small CATV networks, medium sized residences, high rise buildings, recreational facilities, hospitals, hotels, etc.

Basic Unit OH 50

**Wall mounting bracket/
19" installation kit**

Basic Unit	OH 50
Booster Frequency range	
TV	47–862 MHz
FM	87.5–108 MHz
Output level	110 dBµV
Output attenuator	15 dB / 1 dB steps
Input level (FM)	70–100 dBµV
FM attenuator	31 dB / 1dB steps
Test output	- 20 dB
Power supply	180…265 V AC (47…63 Hz)
Input voltage	
Max. power consumption	< 195 W
Efficiency	≥ 85 %
LNB power	12.5 V 1.2 A
Dimensions	443 x 132 (3 HU) x 351 mm
Connectors	2 x F-connector
FM input/RF output	
Test output	1 x F-connector
Control	RJ 11
Software update	USB
Master slave operation	RJ 12
Operating temperature range	- 20 °C to + 55 °C

At one glance:

- Headend basic unit for analog and digital TV signals
- Slots for up to 14 modules (28 channels max.)
- 19" rack mounting or wall mounting
- Integrated FM amplifier
- Easy programming with OH 41 handset
- Update and pre-programming via USB stick
- Remote monitoring module OH 51 is available
- High output power

Transcoder Module

· Reception of a DVB-S signal and processing to an analog-TV-channel
· Demultiplexing and decoding of MPEG-2 signals
· Built-in CI interface
· Input frequency range 950–2150 MHz
· Output frequency range 45–862 MHz
· Vestigial sideband modulator

Module	OH 76 DVB-S – RF analogue channel processing with CI
Input frequency range	950–2150 MHz
Input frequency steps	1 MHz
Input level range	47–70 dBµV
Modulation scheme	QPSK
Frequency steps	1 MHz
Symbol rate	1–45 MS/s
FEC outer code	RS (204,16)
FEC inner code	Conv. (1/2, 2/3, 3/4, 5/6, 7/8)
Output frequency range	45–862 MHz
Frequency steps	250 kHz
Stability of output frequency	± 30 kHz
Output channel bandwidth	7/8 MHz
Output level (1dB steps)	95–105 dBµV
TV standards	B/G, D/K, I, L, M, N
Video standard	PAL, SECAM, NTSC
Video format	4:3, 16:9, 4:3-Zoom
Video decoder	MPEG-2 (ML @ MP)
Audio decoder	MPEG-2 (L1/L2)
Audio format	Mono, Stereo, Dual
S/N video (CCIR-rec. 567-1)	> 57 dB
S/N audio (color test pattern)	> 50 dB
Stability of output level	± 1 dB
Spurious inside TV channel	> 55 dB
Spurious outside TV channel	> 55 dB
Connectors RF input/output	F-connector
Current consumption	ca. 0.80 A
Power consumption	< 10 W
LNB power*	12 V / 0.5 A max.
Operating temperatur range	- 20 °C to + 55 °C

* with 22 kHz/DiSEqC modulator to control multiswitches

Transcoder Module

· Reception of a DVB-S/S2 signal and processing to an analog-TV-channel
· Demultiplexing and decoding of MPEG-2 and MPEG-4 signals
· Built-in CI interface
· NICAM audio processing
· Input frequency range 950–2150 MHz
· Output frequency range 45–862 MHz
· Vestigial sideband modulator

Module	OH 77 DVB-S/S2 – RF analogue channel processing with CI (MPEG-4)
Input frequency range	950–2150 MHz
Input frequency steps	1 MHz
Input level range	47–70 dBµV
AFC	± 10 MHz
Modulation scheme	QPSK, 8PSK
Symbol rate	10–30 MS/s
FEC inner code	LDPC (1/2, 3/5, 2/3, 3/4, 4/5 5/6, 8/9, 9/10)
Spectral inversion	C-Band/KU-Band
Output frequency range	45–862 MHz
Frequency steps	250 kHz
Stability of output frequency	± 30 kHz
Output channel bandwidth	7/8 MHz
Output level (1dB steps)	95–105 dBµV
Spurious inside TV channel	> 55 dB
Spurious outside a TV channel	> 55 dB
TV standards	B/G, D/K, I, L, M, N
Video standard	PAL, SECAM, NTSC
Video format	4:3, 16:9, 4:3-Zoom
Video decoder	MPEG-2 (ML@MP) H.264 (MPEG-4)
Audio decoder	MPEG-2 (L1/L2), AAC
Audio format	Mono, Stereo, Dual, NICAM
S/N video (CCIR-rec. 567-1)	> 57 dB
S/N audio (color test pattern)	> 50 dB
Stability of output level	± 1 dB
Connectors RF input/output	F-connector
Current consumption	ca. 0.80 A
Power consumption	< 10 W
LNB power*	12 V / 0.5 A max.
Operating temperatur range	- 20 °C to + 55 °C

* with 22 kHz/DiSEqC modulator to control multiswitches

· Reception of a DVB-T/C signal and processing to an analog-TV-channel per module
· Demultiplexing and decoding of MPEG-2 and MPEG-4 signals
· Built-in CI interface
· NICAM audio processing
· Input frequency range 110–858 MHz
· Output frequency range 45–862 MHz
· Vestigial sideband modulator

Module	OH 79 DVB-T/C – RF analogue channel processing with CI (MPEG-4)
Input frequency range	110–858 MHz
Input frequency steps	250 kHz
Input level range	47–90 dBµV
Channel bandwidth	7/8 MHz
COFDM spectral	2k and 8k FFT
COFDM modulation scheme	QPSK, 16-QAM, 64-QAM
COFDM guard interval	1/32, 1/16, 1/8, 1/4
COFDM FEC inner code	Conv., K=7, G=1/2, 2/3, 3/4, 4/5, 5/6, 7/8
QAM modulation scheme	16-, 32-, 64-, 128-, 256-QAM
QAM symbol rate	1–7 MBaud
Output frequency range	45–862 MHz
Frequency steps	250 kHz
Stability of output frequency	± 30 kHz
Output channel bandwidth	7/8 MHz
Output level (1dB steps)	95–105 dBµV
Spurious inside TV channel	> 55 dB
Spurious outside a TV channel	> 55 dB
TV standards	B/G, D/K, I, L, M, N
Video standard	PAL, SECAM, NTSC
Video format	4:3, 16:9, 4:3-Zoom
Video decoder	MPEG-2 (ML@MP) H.264 (MPEG-4)
Audio decoder	MPEG-2 (L1/L2), AAC
Audio format	Mono, Stereo, Dual, NICAM
S/N video (CCIR-rec. 567-1)	> 57 dB
S/N audio (color test pattern)	> 50 dB
Stability of output level	± 1 dB
Connectors RF input/output	F-connector
Current consumption	ca. 0.80 A
Power consumption	< 10 W
LNB power*	12 V / 0.5 A max.
Operating temperatur range	- 20 °C to + 55 °C

* with 22 kHz/DiSEqC modulator to control multiswitches

QAM Module

· Reception of two DVB-S/S2 signals and transmodulation into dual QAM-TV-channels
· 2 built-in CI interfaces
· Input frequency range 950–2150 MHz
· Output frequency range 110–858 MHz

Module	OH 85** / 85 H Twin DVB-S/S2 – QAM transmodulator with CI
Input frequency range	950–2150 MHz
Input frequency steps	1 MHz
Input level range	47–70 dBµV
AFC	± 10 MHz
Modulation scheme	QPSK, 8PSK
Symbol rate	2–45 MS/s
FEC inner code	LDPC (1/2, 3/5, 2/3, 3/4, 4/5 5/6, 8/9, 9/10)
Spectral inversion	C-Band/KU-Band
Output frequency range	110–858 MHz
Frequency steps	1 MHz
Stability of output frequency	±30 kHz
Output channel bandwidth	2 x 8 MHz
Output level	85–103 dBµV
Stability of output level	±1 dB
Spurious inside TV channel	>50 dB
Spurious outside a TV channel	>50 dB
SNR	≥45 dB
MER	≥40 dB
Modulation	16-, 32-, 64-, 128-, 256-QAM
Symbolrate	1.0–7.499 MS/s
FEC outer code	RS (204,188,16)
Spectral inversion	normal/inverted
Interleaving	Conv., I=12
Bit stuffing	yes
PCR correction	yes
PID filtering	yes
Connectors RF input/output	F-connector
Current consumption	ca. 0.85 A
Power consumption	<10 W
LNB power*	12 V/0.5 A max.
Operating temperatur range	-20 °C to +55 °C

** OH 85: only DVB-S no HDTV

COFDM Module

· Reception of two DVB-S/S2 signals and transmodulation into dual COFDM-TV-channels
· 2 built-in CI interfaces
· Input frequency range 950–2150 MHz
· Output frequency range 110–858 MHz

Module	OH 88 H Twin DVB-S/S2 – COFDM transmodulator with CI
Input frequency range	950–2150 MHz
Input frequency steps	1 MHz
Input level range	47–70 dBµV
AFC	± 10 MHz
Modulation scheme	QPSK, 8PSK
Symbol rate	2–45 MS/s
FEC inner code	LDPC (1/2, 3/5, 2/3, 3/4, 4/5 5/6, 8/9, 9/10)
Spectral inversion	C-Band/KU-Band
Output frequency range	110–858 MHz
Frequency steps	1 MHz
Stability of output frequency	±30 kHz
Output channel bandwidth (bonded)	2 x 7/8 MHz
Output level	95–105 dBµV
Stability of output level	±1 dB
Spurious inside TV channel	>50 dB
Spurious outside TV channel	>50 dB
SNR	≥41 dB
MER	≥37 dB
Modulation	QPSK, 16-, 64-QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
FFT Mode	2k, 8k
Bit stuffing	yes
PID filtering	yes
Connectors RF input/output	F-connector
Current consumption	ca. 0.85 A
Power consumption	<10 W
LNB power*	12 V/0.5 A max.
Operating temperatur range	-20 °C to +55 °C

* with 22kHz/DiSEqC modulator to control multiswitches

COFDM Module

· Reception of two DVB-T/C signals and transmodulation into dual COFDM-TV-channels (bonded)
· Input frequency range 110–858 MHz
· Output frequency range 110–858 MHz

Module	OH 89 Twin DVB-T/C - COFDM transmodulator with CI
Input frequency range	110–858 MHz
Input frequency steps	250 kHz
Input level range	47–90 dBµV
Channel bandwidth	7/8 MHz
COFDM spectral	2k and 8k FFT
COFDM modulation scheme	QPSK, 16-QAM, 64-QAM
COFDM guard interval	1/32, 1/16, 1/8, 1/4
COFDM FEC inner code	Conv., K=7, G=1/2, 2/3, 3/4, 4/5, 5/6, 7/8
QAM modulation scheme	16-, 32-, 64-, 128-, 256-QAM
QAM symbol rate	1–7 MBaud
Output frequency range	110–858 MHz
Frequency steps	1 MHz
Stability of output frequency	±30 kHz
Output channel bandwidth (bonded)	2 x 7/8 MHz
Output level	95–105 dBµV
Stability of output level	±1 dB
Spurious inside TV channel	>50 dB
Spurious outside TV channel	>50 dB
SNR	≥41 dB
MER	≥37 dB
Modulation	QPSK, 16-, 64-QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
FFT Mode	2k, 8k
Bit stuffing	yes
PCR correction	yes
PID filtering	yes
Connectors RF input/output	F-connector
Current consumption	0,5 A/12 V
Power consumption	<10 W
Operating temperatur range	-20 °C to +55 °C

A/V Modulator

· Modulation of 2 A/V signals to 2 analog TV channels
· Multi standard operation
· Stereo capable vestigial sideband modulator, independently adjustable in 250 kHz steps
· Interface for audio/video with BNC/Cinch
· Output frequency range 45–862 MHz

Module	OH 38 Twin A/V-Modulator
Video input level	1 V ± 0,4 V
Video input bandwidth	20 Hz–5 MHz
Audio input impedance	600/10 k Ohm
Audio input level (for nom. deviation)	-4 dBm/1 kHz
Audio level range	-9 dB...+5 dB
Audio input bandwidth	40–15000 Hz
Output impedance	75 Ω
Output frequency range	45–862 MHz
Frequency steps	250 kHz
Stability of output frequency	±30 kHz
Output channel bandwidth	2 x 7/8 MHz
Output level (1 dB steps)	±1 dB
TV standards	B/G, D/K, I, L
Audio format	Mono, Stereo, Dual
S/N video (CCIR-rec. 567-1)	>58 dB
S/N audio (color test pattern)	>50 dB
Stability of output level	±1 dB
Spurious inside TV channel	>55 dB
Spurious outside TV channel	>55 dB
Power consumption	<8 W
Operating temperatur range	-20 °C to + 55 °C