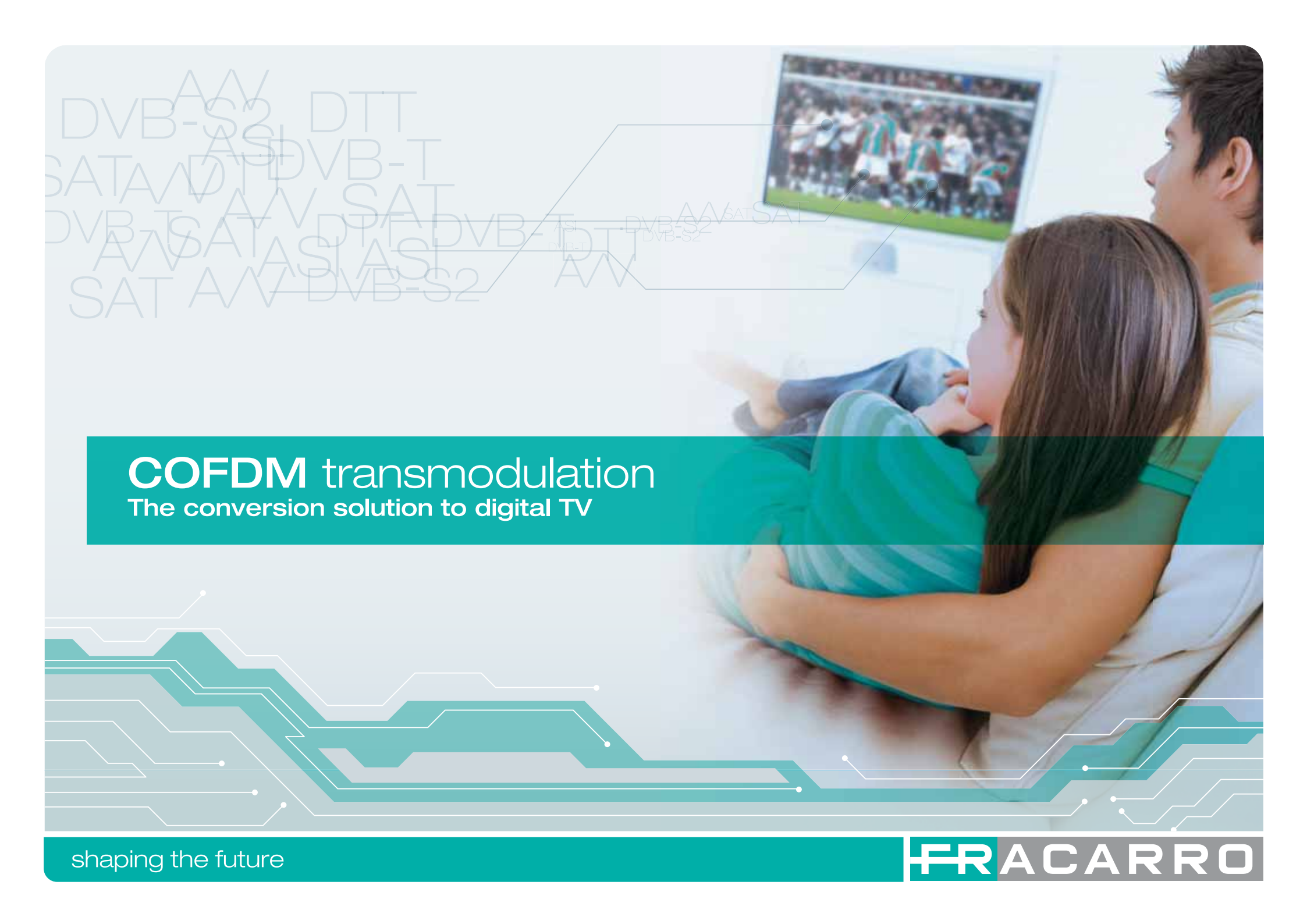


A couple is sitting on a couch, watching a soccer game on a large television. The scene is overlaid with various digital signal and technology terms in a light gray font, including DVB-S2, DTT, ASI, DVB-T, SAT, and DVB-S. A network of thin white lines connects these terms across the upper half of the image. The bottom of the image features a teal banner with the company name and a decorative circuit-like pattern on the left side.

COFDM transmodulation

The conversion solution to digital TV

shaping the future

FRACARRO

COFDM transmodulation

The conversion solution to digital TV

Our new range of products enables the distribution of satellite programs and A/V sources by means of COFDM modulation. With our products satellite programs and other different services can be received using a digital terrestrial receiver or a TV set with a built in digital terrestrial tuner.

This solution is ideally suited for distributing signals in large residential and multi-dwelling units, holiday villages and hotels.



Advantages of using COFDM modulation

- ▶ Uses the existing TV installation
- ▶ No more STBs required for new TV sets
- ▶ Bandwidth use is optimised
- ▶ Installation costs are reduced
- ▶ Easy to install technology

Our system benefits

- ▶ LCN management embedded
- ▶ Automatic output bandwidth management in case of input overloading
- ▶ MPEG2/MPEG4 and HD compliant (Headline Series)
- ▶ It is possible to maintain encrypted streams
- ▶ Installation can be controlled remotely

With our products, part of the renowned K Series and Headline Series, every installation requirement can be met. From any source (satellite – digital terrestrial – analogue – ASI – etc) a DVB-T signal can be obtained.

Satellite to COFDM

IN \ OUT	COFDM
DVB-S	SIG7330 + SIG7120
DVB-S	KSTT
DVB-S_CI	SIG7340 + SIG7120
DVB-S2_CI	SIG7100 + SIG7120

DTT to COFDM

IN \ OUT	COFDM
DVB-T	SIG7531 + SIG7120
DVB-T_CI	SIG7540 + SIG7120

Analogue to COFDM

IN \ OUT	COFDM
A/V	SIG7404 + SIG7121

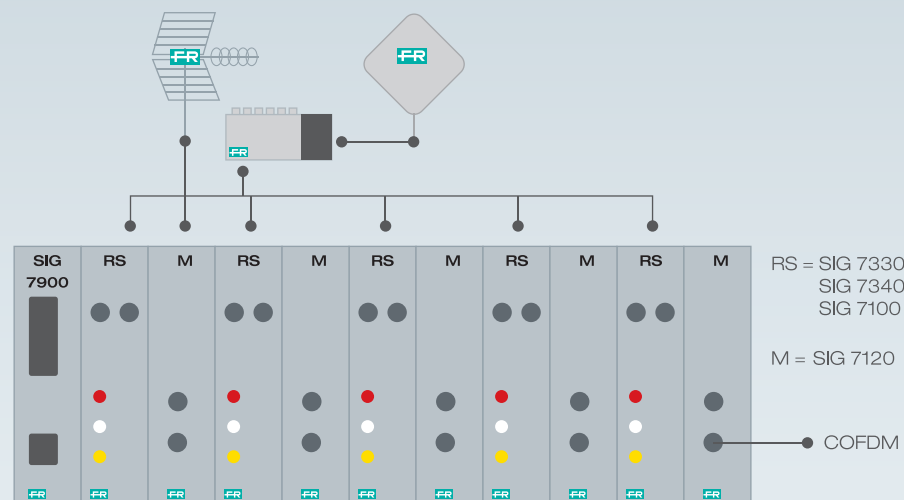
Professional to COFDM

IN \ OUT	COFDM
ASI	SIG7121

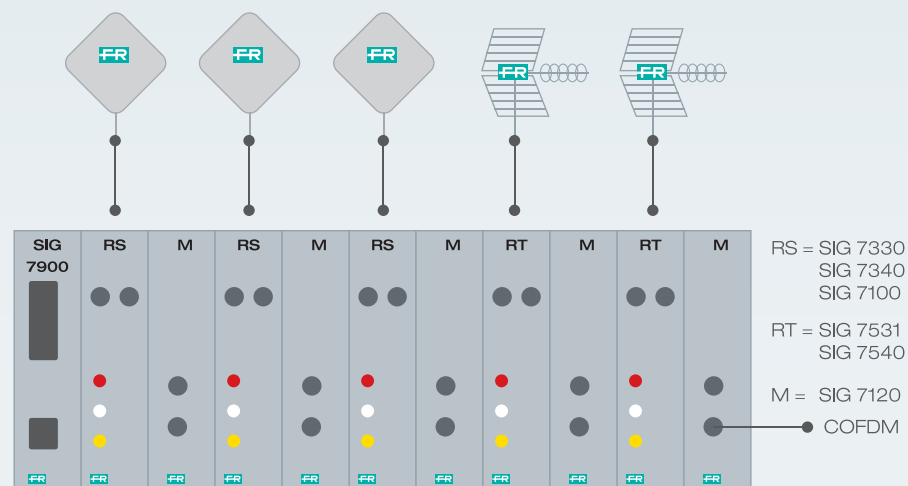
Headline

Installation examples

SAT to COFDM - For both FTA and encrypted signals



DTT + SAT to COFDM



Technical data

Item (code)	SIG7120 (283950)	
Output signal		
Output connector	F female	
Output frequency	MHz	108-862
Frequency step	KHz	10
Max. output level	dBμV	85
Level adjustment	dB	0-15
Loop-through loss	dB	< 1,5
Carrier	2K, 8K	
Modulation	QPSK, 16QAM, 64QAM	
FEC	1/2, 2/3, 3/4, 5/6, 7/8	
Guard interval	1/4, 1/8, 1/16, 1/32	
Spectrum	Normal/Inverted	
MER	dB	38

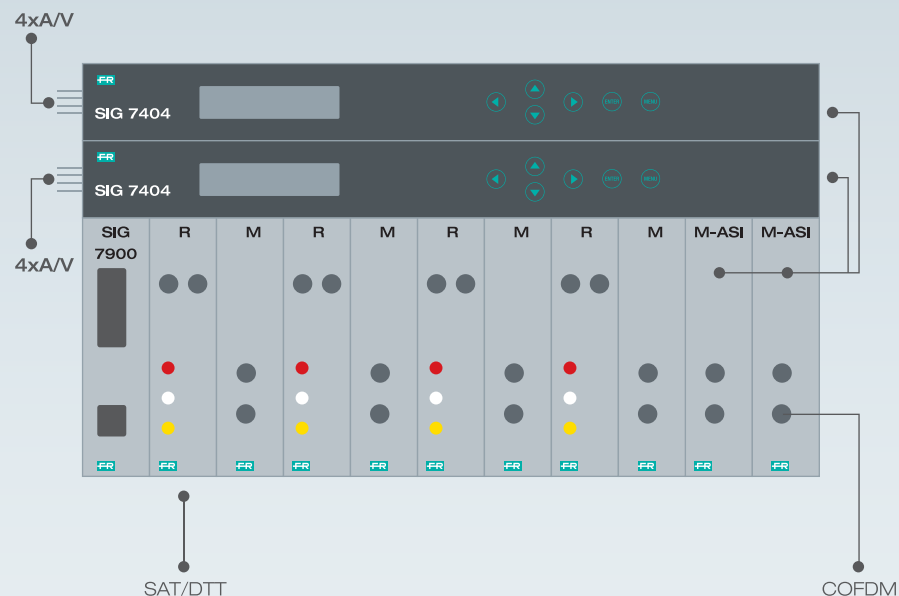
Item (code)	SIG7330 (283954)	SIG7340 (283955)	SIG7100 (283949)
SAT input			
Frequency input	MHz	950-2150	950-2150
Min. frequency step tuning	MHz	1	1
AFC	MHz	±5	±5
Input level	dBμV	48-85	48-85
Loop-through insertion loss	dB	2	2
Symbol rate	MSy/s	2-40	2-40 (DVB-S), 2-30 (DVB-S2)
Common Interface			
Connector	-	PCMCIA	PCMCIA
Standard	-	EN50221, TS101699	EN50221, TS101699

Item (code)	SIG7531 (283952)	SIG7540 (283951)
DTT input		
Bandwidth	MHz	174-230, 470-862
Min. frequency step tuning	KHz	167
Channel bandwidth	MHz	7, 8
Loop-through bandwidth	MHz	47-862
Loop-through insertion loss	dB	1
Input level	dBμV	30-80
AFC (2K, 8K)	KHz	±285, ±142
Carrier	MSy/s	2 - 30
Guard Interval	1/4, 1/8, 1/16, 1/32	
Modulation	QPSK, 16QAM, 64QAM	
Hierarchy	High/Low	
FEC	1/2, 2/3, 3/4, 5/6, 7/8, auto	
Common Interface		
Connector	-	PCMCIA
Standard	-	EN50221, TS101699

Headline

Installation example

A/V to COFDM



R = SIG 7330
SIG 7340
SIG 7100
SIG 7531
SIG 7540

M = SIG 7120

M-ASI = SIG 7121

* For DTT and SAT signals see examples on previous page

Technical data

Item (code)	SIG7121 (283953)
ASI input	
ASI connector	BNC, 75 Ohm
Max. bit rate	Mbit/s
	216
Output signal	
Output connector	F female
Output frequency	MHz
	108 - 862
Frequency step	KHz
	10
Max. output level	dBμV
	85
Level adjustment	dB
	0-15
Loop-through loss	dB
	< 1,5
Carrier	2K, 8K
Modulation	QPSK, 16QAM, 64QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
Spectrum	Normal/Inverted
MER	dB
	38

Item (code)	SIG7404 (287075)
Input	
Video connectors	CVBS, S-Video
Video formats	PAL, NTSC
Audio connectors	Analogue balanced
Output	
Type	DVB-ASI
Max. bit rate	Mbps
	170
Effective bit rate	Mbps
	1-15
Connector	BNC, 75 Ohm
ASI mode	BYTE
Coding	
Video standard	MPEG-1, MPEG-2 MP@ML(4:2:0)
Video bit rate	Mbps
	2.5-15
Audio	MPEG-1 Layer I, Layer II
Audio rate	Kbps
	32, 64, 128, 192, 256, 384
Audio sampling rate	KHz
	32, 44.1, 48
General features	
Output connector	ASI
Standard video	PAL, NTSC
Video format	Full D1, Half D1, SIF, QSIF
Mains voltage	220-240V~, 50-60Hz
Power consumption	W
	30
Dimensions	mm
	318 x 483 x 44



K Series

KSTT - Transmodulator

From **DVB-S** to **DTT**

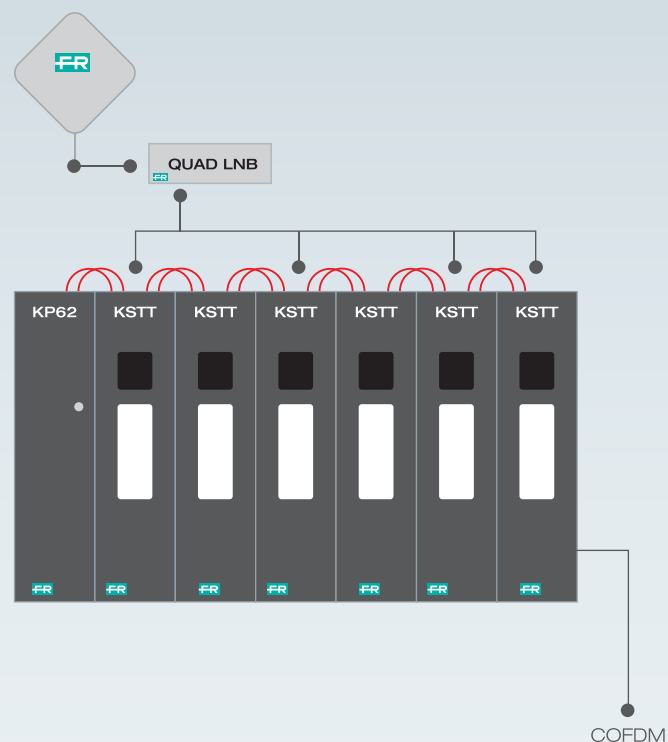
The K Series is enhanced with a new module that receives SAT signals and distributes them in DVB-T standard.

Key points

- ▶ 1 module contains both a SAT receiver and DTT modulator
- ▶ SAT signal quality remains unchanged when converted to digital
- ▶ LCN management embedded
- ▶ Enables the insertion of different free-to-air satellite programs in one single channel
- ▶ Has all the advantages of K Series modularity

K Series Installation example

SAT to COFDM



Available from June 2010

Technical data

Item (code)		KSTT (270461)
Satellite front end		
Input frequency	MHz	950-2150
Input level	dBμV	48-85
LNB control		0/14/18VDC, 0/22KHz, DiSEqC 1.0
Demodulation		QPSK (DVB-S)
FEC		1/2, 2/3, 3/4, 5/6, 7/8, AUTO
Symbol rate	Ms/sec	2 - 40
Loop-through input loss	dB	2
OFDM modulation		
Trasmission standard		DVB-T
Bandwidth	MHz	6, 7, 8
Carriers		2k, 8k
Modulation		QPSK, 16-QAM, 64-QAM
Guard interval		1/4, 1/8, 1/16, 1/32
FEC		1/2, 2/3, 3/4, 5/6, 7/8, AUTO
RF output		
Output frequency	MHz	111-862
Max. output level	dBμV	85
Output level adjustment		0-15
Loop-thorough output loss	dB	1
Flatness	dB	1
Output MER	dB	> 34
General features		
Supply voltage	V	12
Absorption	mA	Max. 630 (without LNB) Max. 1100 (with LNB)
Dimensions	mm	40x200x155
Operating temperature	°C	-10 to +55

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