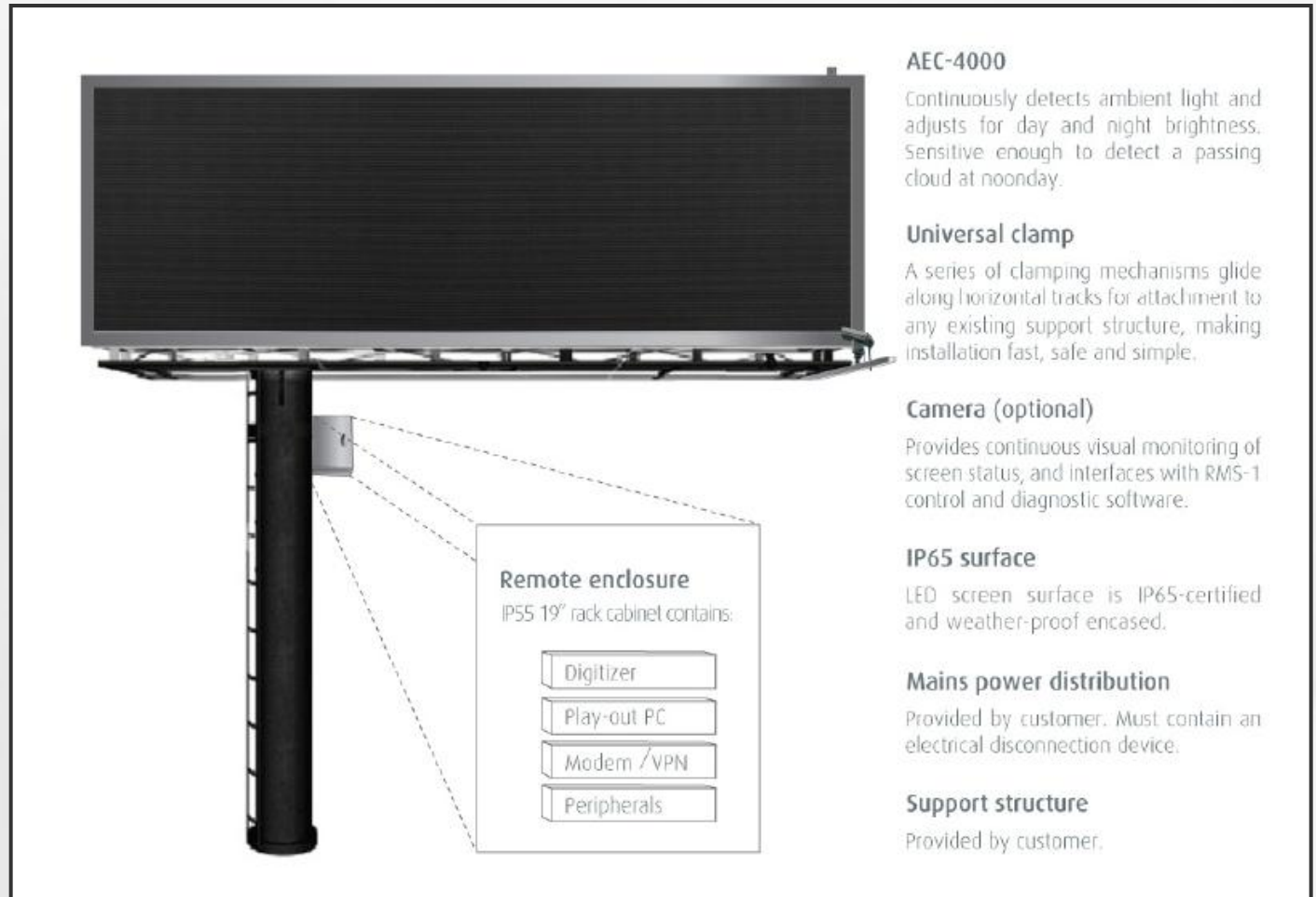




**TF-20**

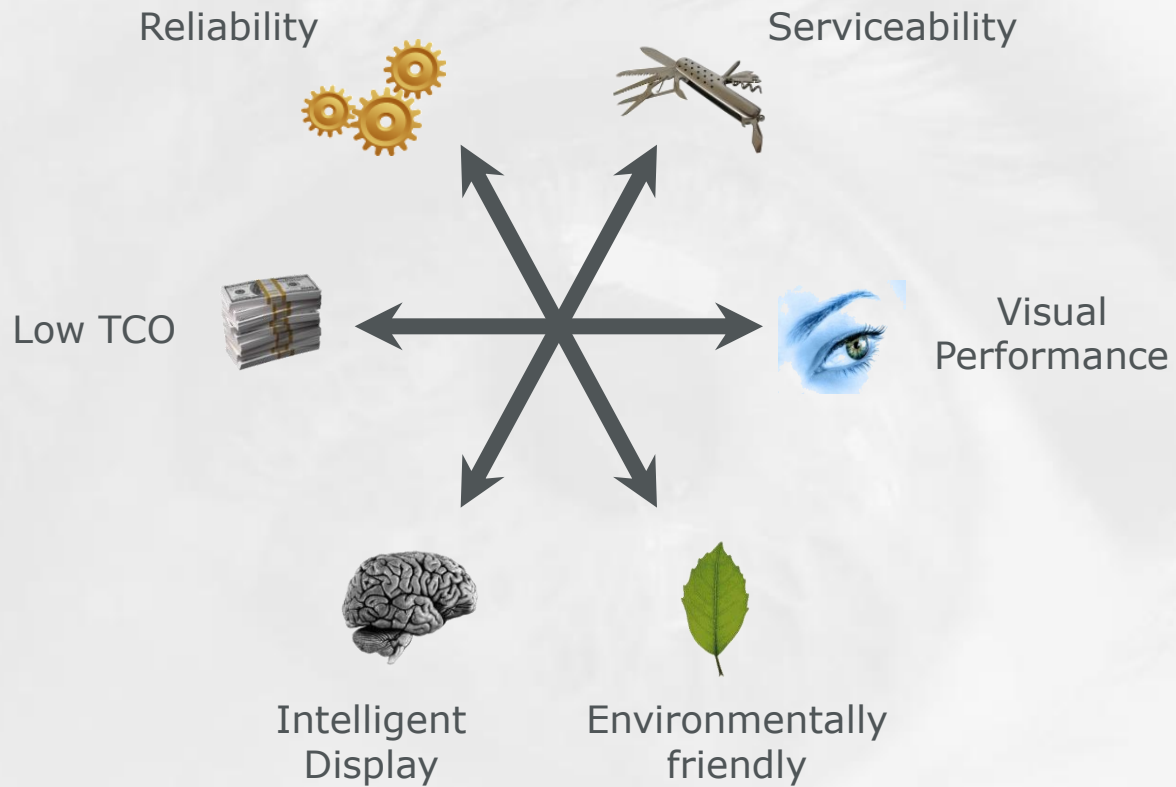
Product Presentation

# Typical set-up



# Benefits for outdoor advertising

- The Tf-20 product line has been designed with the outdoor advertising customers needs in mind.



## KEY FEATURES

- 1 – Excellent Visual Performance
- 2 – Low Power Consumption
- 3 – Unique Redundant Power Supply System
- 4 – Wide Operating Temperature
- 5 – Environmentally Friendly
- 6 – Easy set-up and installation
- 7 – Intelligent Display

## **KEY FEATURE 1**

### **Excellent Visual Performance**



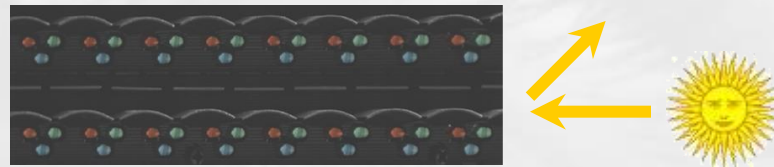
- High brightness
  - **7,600 Nits calibrated (typical)**
- High contrast
  - **4000:1 due to the advanced shader design**
- 16 bit / color processing
  - **To show up to 281 trillion shades of color**
- Tilted LED
  - **More efficient use of available brightness**
- System color signature
  - **Excellent color and brightness uniformity**

## Excellent Visual Performance

### Revolutionary shader design



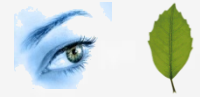
- Light traps deflect external light, for good image even in direct sun-light.



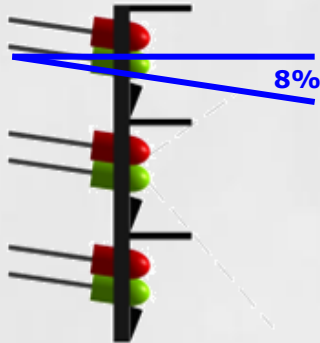
- Unique shader geometry drains rainwater for good image in all weather conditions.
- These shaders are field-replaceable.
  - ⇒ **Replace only the shader (and not the full frame) when it is damaged**

# Excellent Visual Performance

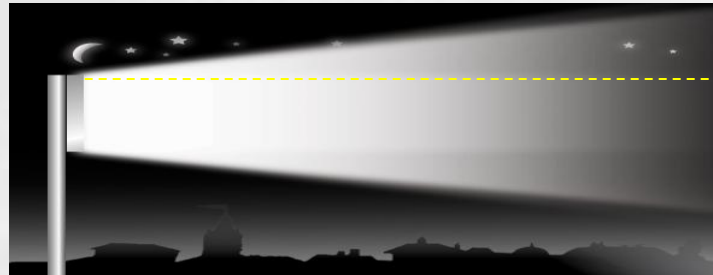
## 8° tilted LEDs



- Tf-20 LEDs are tilted 8° down
- Benefits
  - **26% more efficient use of available brightness**
  - **37% less light pollution**

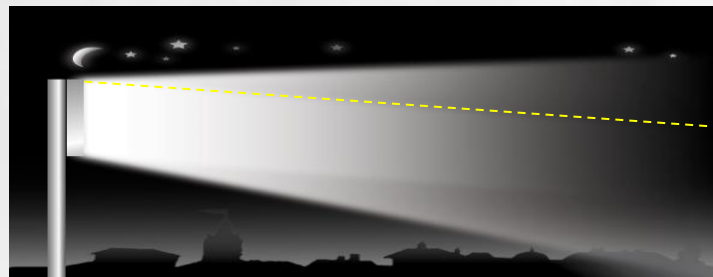


Typical digital billboard light emissions



Light pollution

DB-x20's 8°tilted light emissions



Efficient use of brightness

## KEY FEATURE 2

### Low power consumption



- Tf-20 has very low power consumption

- Benefits



#### **COST SAVINGS**

=> You will save money during the 7 years life-time of the display



#### **INCREASED RELIABILITY**

=> Low power consumption => Less heat generation

=> Less stress on components

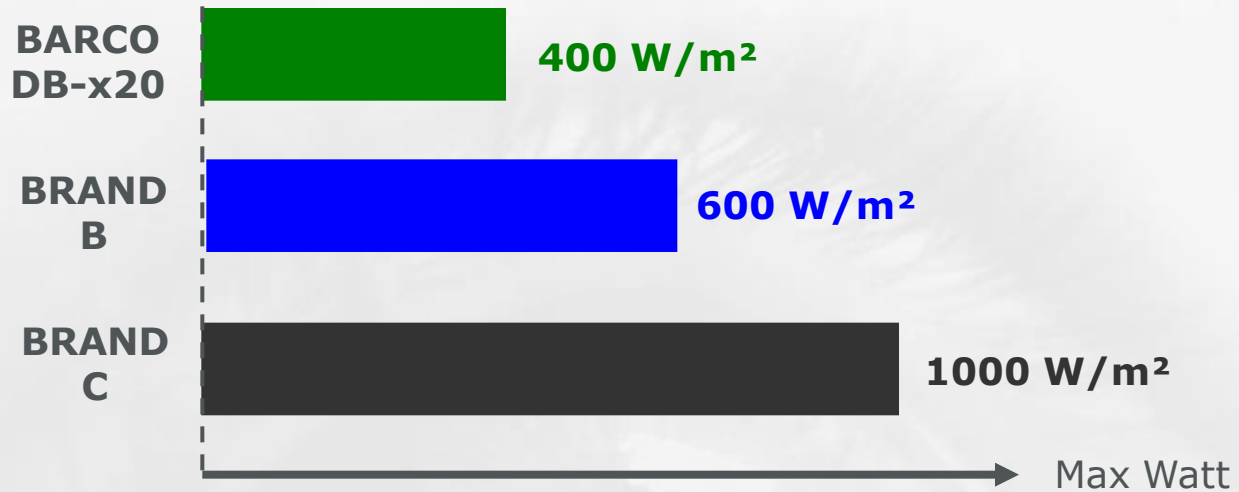


#### **ENVIRONMENTALLY FRIENDLY**

=> Support the digital outdoor industry in becoming more "green"



# Low Power consumption = Cost Savings



	Yearly Savings (compared to B)	Yearly Savings (Compared to C)
Poster	~615 \$/yr	~1,850 \$/yr
Small Bulletin	~920 \$/yr	~2,760 \$/yr
Bulletin	~1850 \$/yr	~5,520 \$/yr

$$\text{Yearly savings} = \Delta\text{Max} \cdot 25\% \cdot 0,07\$/\text{Kwh} \cdot 24\text{h} \cdot 365\text{d} / 1000$$

## KEY FEATURE 5

### Environmentally friendly



- Efficient use of energy
  - **Low power consumption**
  - **Power Factor Correction (PFC)**
    - Found only in high-end LED screens, PFC reduce mains harmonics and mitigates the electrical impact on power networks, improving stability while conserving energy.
  
- Reduced light pollution
  - **Light sensor to dim display at night**
  - **8° down tilted LED**
  
- Certified green
  - **Compliance with ETL, FCC**
  - **ROHS environmental standard**
    - ROHS = Restriction of Hazardous Substances
  - **Electro Magnetic Compatibility (EMC)**
    - work in its electromagnetic environment without adversely either influencing the surrounding devices, or being influenced by them.

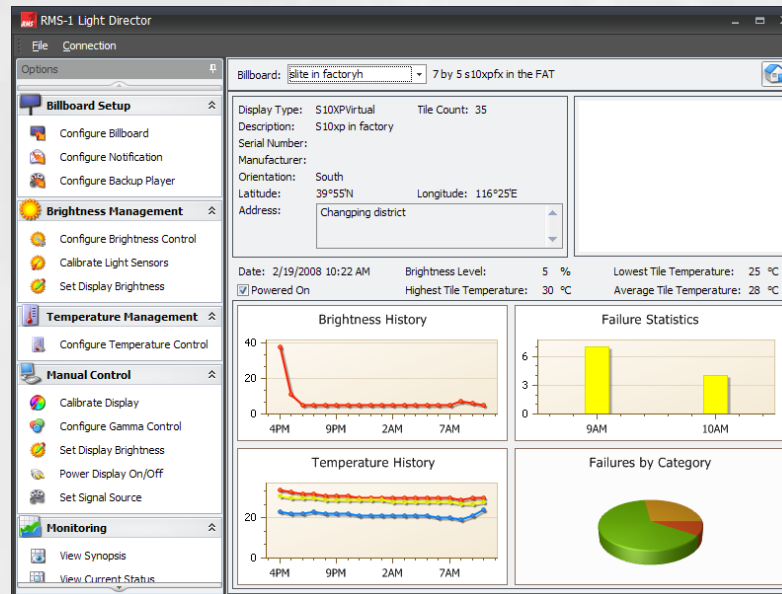


# Intelligent Display

## RMS-1 Software



- 1 – Easy display set-up in few steps
- 2 – Home Page with Camera & Diagnostic summary
- 3 – E-mail service for automatic alerts
- 4 – Open XML interfaces for easy NOC integration
- 5 – Advanced brightness control with fail-over system

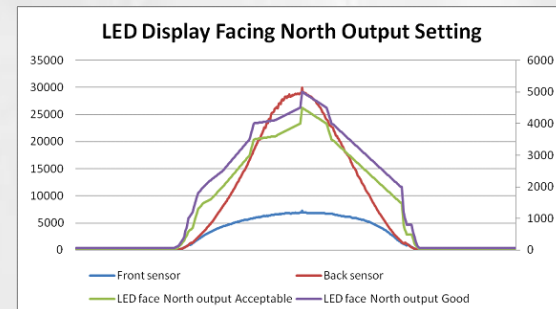


# Intelligent Display

## Advanced Light Sensor & Brightness Control

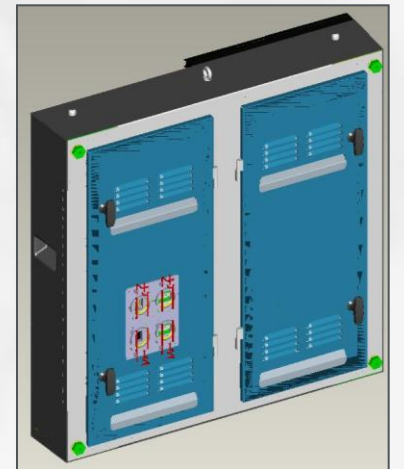
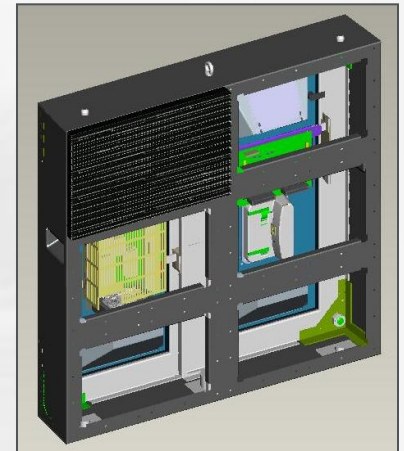


- Ultra reliable light sensor
  - 4 redundant sensors
  - Integrated diagnostic function (integrated LED)
  - IP65 and wide operating T° for long-term outdoor use
- Intelligent Fail-over system
  - Prevent display brightness to go too bright at night
  - Triggered automatically by sunset-sunrise calculator
- Precise light sensor
  - Back & front sensors for optimal lux reading
  - Sensitive sensor (0.1 Lux ~ 100,000 Lux)
  - Dust-proof protection glass



## TF-20 Specification Summary

- **20mm** pixel pitch LAMP LED's
- 7600nit calibrated brightness
- High contrast ratio
- 8°down tilted LED
- Replaceable shaders
- 16 bit tile processing
- 53Kg/sqm (est)
- 960mm x 960mm
- 400W/m<sup>2</sup> Max Watt
- Water resistant, IP65 front / IP54 back
- Operation -35C to 50C
- Front and back servicing

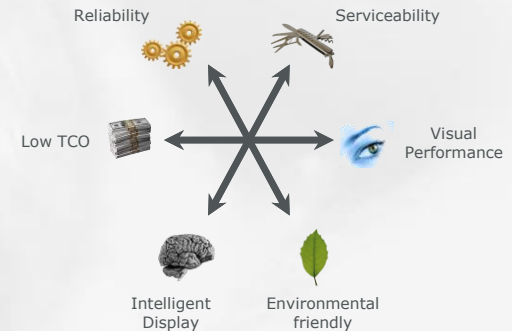


## TF-20 unique features

- Excellent image in all sunlight conditions
- Extremely low power consumption
- 8° down tilted LED
- Advanced shader design - repleacable
- Wide operating temperature
- Light tile weight

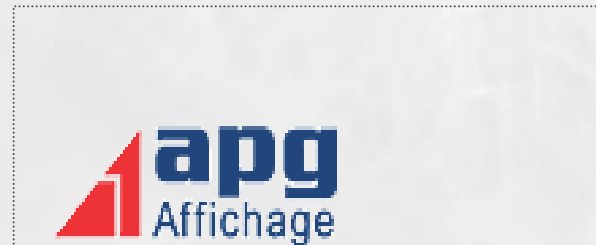
# Summary

- Barco commitment to Outdoor Advertising Industry
  - Solid Corporate Financials
  - Volume Manufacturing in China (BARCO quality standards)
  - Focussed strategy on outdoor advertising
    - **New DB-x20 product**
    - **Long term commitment including major R&D investments**
  - Strong installation/service team WW & growing
- New DB-x20/TF-20 product line
  - 1 – Excellent Visual Performance
  - 2 – Low Power Consumption
  - 3 – Unique Redundant Power Supply System
  - 4 – Wide Operating Temperature
  - 5 – Environmentally friendly
  - 6 – Easy set-up and installation
  - 7 – Intelligent display



## Some References:

- Barco has an extensive and continuously growing list of clients. Find below a representative sample of some of our current clients.





## Tf-16: The NEW 16mm

- Tf platform

	TF-16
Dimensions (HxWxD)	960mm x 960mm x 250mm
Pixel pitch	16mm
LEO configuration	1R, 1G, 1B
LED density	7,500/m <sup>2</sup>
Brightness (calibrated)	7,000 NIT
Viewing angle (horizontal)	+/- 60°
Viewing angle (vertical)	+15°/-45°
Contrast	3,800:1
Weight	58 kg
Power consumption (max)	400 watts/m <sup>2</sup>
Operating temperature	-35 to 45 ° C
Color processing	16-bit/color
Colors	281 trillion
Serviceability	Front/back
Lifetime	100,000 hours